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JANUARY



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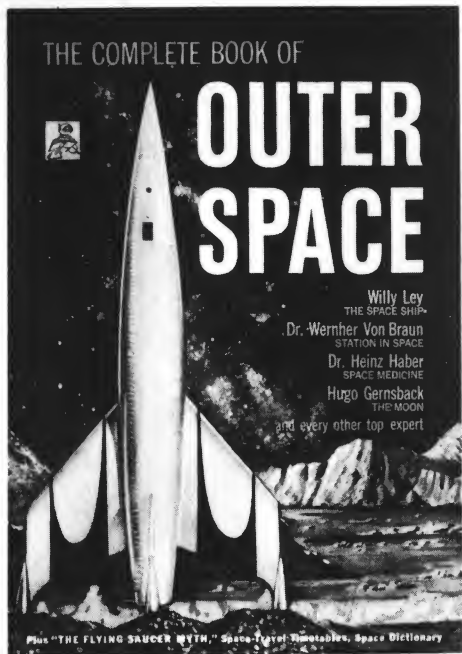


ONE IN A THOUSAND a science fiction novelet
by J. T. McIntosh

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THE MAGAZINE OF

Fantasy and Science Fiction

VOLUME 6, No. 1

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All entries must be postmarked not later than January 8th, 1954. The winning writer will be announced in our May, 1954 issue (on the stands in early April), and contest winners will be notified personally early in February.

The contest is open to all but employees of Fantasy House, Inc., Mercury Publications, and their families. All letters become the property of Mercury Publications. The editors will be the judges, and their decisions will be final; further, for obvious reasons, we must regretfully state that we shall not be able to enter into correspondence concerning individual letters.

FANTASY AND SCIENCE FICTION, 2643 Dana Street, Berkeley, California

In our February, 1953, issue we happily published One In Three Hundred, Mr. McIntosh's grimly realistic story of a lieutenant in the Space Service, Bill Easson, choosing that handful of citizens of a small town who would be given a chance to survive earth's annihilation. That bare chance was flight to Mars in a tiny, jerry-built lifeship. Of course, such a story demanded a sequel and here it is: Bill Easson's quiet but intense account of the long trip to Mars, from the initial blast-off to journey's turbulent end. This chronicle of ordinary men, women and two children, living in each other's laps, unable even to make love in privacy, fighting boredom, despair and occasionally each other, longing for their lost home and facing an unguessable future will surely stand, we think, as one of the all-time great stories of interplanetary travel. Note: Previous stories by Aberdeen's ablest young writer have been over the by-line of M'Intosh. He has abandoned this traditional Scottish spelling because too many Americans and Englishmen (including a certain American editor's wife and the entire conclave of London's aficionados assembled at the White Horse Inn) have read and pronounced the name as Mintosh!

One in a Thousand

by J. T. McINTOSH

I

SOMEWHERE BETWEEN THE surface of Earth and Mars, well on the way or just about to take off, there were 700,000 odd lifeships. And believe me, the operative word was "odd." It took about a year to build a spaceship, and each and every one of these lifeships had been thrown together in eight weeks.

Problem: If 2000 skilled men can build a lifeship in a hundred days, how long will it take a thousand unskilled men to do it? Answer: 56 days. If your math's as good as mine (and mine isn't so hot) you'll get a pretty good indication of the standard of workmanship in the lifeships.

I was lying in the pilot's acceleration couch, controlling the ship with my fingertips, as far as it was being controlled at all, and hearing, seeing and

feeling the fuel drain away as if it were my lifeblood. I had a simple enough choice. I could stop the blast now, and crash back on Earth; or I could let it roar out of the tanks the way it was doing, and crash somewhere else, if I ever reached anything to crash against.

When I say "in" the couch I mean just that. The couch was constructed so that I was half sitting, half lying, knees up to assist the circulation. That was a better position in which to withstand the acceleration than lying flat. I was strapped up like a mummy with imprex tape supporting my muscles. And though the couch wasn't particularly soft — it felt like solid rock — I was almost submerged in it.

But that was unimportant. What mattered was this — somehow the lifeship had to escape from Earth's attraction, and sometime it had to land on Mars. There wasn't enough fuel to do it. I could see that now, only a matter of seconds from take-off. Ten people, lower down in the lifeship, were depending on me and on the ship for life that the ship and I weren't going to be able to give them.

I was thinking like a prairie fire, though I was practically certain there was no solution. Soon I had a little piece of an answer. My fingers moved and the blast mounted. Anyone below who had thought nothing could be worse than 6G found his mistake as the acceleration went up and up.

The ship was designed for four minutes' blasting, but if I was to save fuel there was only one way to do it. That was to get off quicker, reach escape velocity and stop blasting sooner, save the fuel which would have been needed to hold the ship up during the extra time.

I refused to think about the linings. They were designed for four minutes' blast, presumably, and now they were being asked to take the same thrust in less time.

I nearly blacked out. I screamed and hardly heard myself. You won't understand how I felt physically unless the same kind of thing has happened to you — when you must and do remain conscious but you're so near unconsciousness that perceptions sent along the nerve channels to your brain simply don't leave any record there. You have to notice them as they happen or you've lost them.

I strained my eyes at the dials in front of me, trying to make them mean that I could cut the drive. They persisted in telling the truth, which was no good to me. That showed me why people sometimes strain to believe something they know is false. Hopeful fantasy is much more attractive than hopeless fact.

At last I was able to cut the drive. It had been on for hours. The chronometer said it was only three minutes or so, but I knew better. It didn't stop cleanly. The couch gradually rose, and I floated off, weightless.

You never quite get used to free fall, no matter how often you experience it. It's a surprise every time when up and down disappear from the environment and the normal way of getting about ceases to be beetle-like and becomes bird-like. It's amusing or frustrating, depending on how you're feeling at the time, when you want to go one way and find yourself going the other, impelled by some tiny movement of air you can't see and normally wouldn't notice at all.

The body adjusts to the new conditions more quickly than the mind. The lungs and heart and stomach, puzzled for a few minutes by the absence of gravity, soon learn their new job and do it as well as they did the old one. Clothes and hair are inconveniences, though. Practically every garment of civilization except riding breeches and bathing suits depends to some extent on gravity to hold it in place. Whenever I moved, my jacket began to ride up about me like water wings, and my trousers gradually worked themselves in untidy folds up my legs, showing the imprex tape underneath.

I found Mars through the tungsten glass ports and began to check on the old space navigators' Irishism — whether it would be where we were when we got there. But I wasn't allowed much grace. Sammy Hogan came in, his face grim.

"Mary Stowe's dead," he said briefly.

I couldn't understand that at first. Somebody dead — already? It interfered with my long-term calculation that we were all going to die. It jammed the works for a moment, this curious, irrelevant intimation that someone hadn't waited for the execution that appeared to be planned for us all.

"Acceleration?" I asked.

"That and her couch collapsing. It couldn't take the strain. Bill — didn't you accelerate more than you were supposed to?"

"Yes," I said.

"Then that killed her," he said bluntly. "The extra weight came on — and the couch broke. That was —"

"Go away," I said.

Sammy swore. "Dammit, Bill," he said hotly, "you're responsible for all of us. You're the man in charge. Is that all you have to say? If you had to do it —"

I turned and looked coldly at him. "I'm responsible for getting this ship to Mars," I said curtly. "I'm not leaving here until I'm satisfied about that — not if the whole lot of you die. If this room had a door, I'd lock it to keep you all out. Now go and leave me alone. I'm sorry, Sammy, but I haven't time to be civil."

I went back to my calculations. I didn't notice Sammy going.

The first check was encouraging, as far as it went. There could be no

precision about flying a lifeship — navigation with mass produced instruments, and very few of them at that, was little more than an affair of pointing the ship's nose in roughly the right direction and praying.

And on this basis, it looked as if I could leave the course as it was and not waste any of my precious fuel making corrections. I wasn't too sure of our velocity — that would take days of checking by the planets — but it seemed that in about a hundred days the lifeship, in free fall, and Mars, in its orbit round the sun, would have reached about the same spot.

Then, more carefully, I worked out how much fuel I'd need for a safe landing on Mars, how much I had, and tried to close the gap as much as possible. Mathematically it couldn't be done. I just couldn't land safely on Mars, according to my quadruple-checked figures.

I covered sheet after sheet with laborious calculation. The best I could produce, the most favorable extrapolation, crooked, weighted mathematics though it was, was still a very slim chance indeed.

Drugged with figures, working out more and more from sheer obstinacy, stubbornly trying everything I could think of to try, I came up with the conclusion that our chances of getting to Mars, when we left the soil of Earth, had been about a 1000 to 1 against. And they weren't a hell of a lot better now.

True, we were clear of Earth and on a good course for Mars. We *were* over the first hurdle. We had accomplished what, at a guess, only 2 or 300,000 of the 700,000 lifeships had been able to do.

But of those 2 or 300,000, many must have used all their fuel in tearing themselves free of Earth — and those ships were utterly helpless. Some of them would be shooting off in all directions, every moment getting further from Mars, and utterly incapable of doing anything about it. Some of them would be pointed at the sun, or close enough to it to be captured by it. Some would move on and on past the planets into space . . . those ships would go on forever if they weren't captured by some star or planet.

I didn't swear or curse at anyone. I just worked out problem after problem, as if I could set everything right by my high school mathematics.

On the basis of our own experience I worked out how much fuel the lifeships really needed. Then, since they would have to be so much bigger and stronger, how many lifeships there would have been instead of 700,000. How many people could they have taken.

Allowing a very small safety factor, it came out at 97,000. A chance of life for a million people instead of nearly eight million. Not one in 300 of the people of Earth, but one in 22,000.

I tried to imagine the job I might have had then, the job of picking out ten people from a town of over 200,000. As it was, I knew hardly anything

about some of the people I'd chosen from a mere 3,000 or so, supposed to be the ten I thought most worth saving for one reason or another. Sammy, Leslie, Betty and Morgan were all last-minute choices, because someone else had had to come off the list. On the whole I was prepared to gamble on the first two, but Morgan and Betty could be my best choice or my worst for all I knew. What sort of guess could I have made if I'd been confronted with a quarter of a million people and told to pick ten?

I shook my head wearily. The questions were too big for me. I had juggled too long with figures of life and death — a little life and a lot of death. They weren't anything but figures to me. Perhaps that was why I had done it — to reduce humanity's most frightful disaster to a few real figures, like four and seven and three, with a lot of incomprehensible zeros after them.

Understanding might come later. But meantime I had reached a mental dead stop.

I gave myself a push against the wall, guided myself with my arms, and swam out into the main room of the lifeship, which Sammy had already christened ironically "the lounge."

Lifeships were simply moving barns. There was nothing to be seen in the so-called lounge except white panelling, steel floors, ten couches and nine people floating about, with something on one of the couches covered by a sheet.

Little Bessie Phillips, unrepressed by tragedy, was flying about in the air, delighted by the absence of gravity. Jim Stowe, dry-eyed, was sitting with his father, one leg curled round the frame of the couch to hold him down. Jim was thirteen, Bessie eight. Betty Glessor and Morgan Phillips were in a corner, whispering. Sammy, Leslie Darby, Harry Phillips and Miss Wallace formed another group, holding the edges of a couch to keep themselves still.

They couldn't help becoming suddenly silent when I came in. They knew, all of them, how I'd been supposed to take off — I'd told them myself what it would be like — and it hadn't been like that. Unless something had gone wrong, unless somehow I was forced into it, I had done something on the spur of the moment and as a result Mary Stowe had died.

Maybe I had tried to be clever, they were thinking. I could see it in their faces. They were waiting for me to explain, hoping I could, fearing I couldn't.

I went over to Mary Stowe's couch. Nobody moved. The sheet was tied at the four corners to the frame. I untied one corner and saw what had happened.

When Mary's weight went up to half a ton or so, one of the steel supports under the couch had snapped. Then another. The couch became a switch-back — and, quite naturally, Mary's back was broken.

I averted my eyes from the dead woman's face. She had not died pleasantly, and her face showed it.

"Somebody help me to get the body outside," I said.

They realized that had to be done. Sammy pushed against the couch he was holding, and floated over to me. We took hold of the limp body and clawed our way to the base of the ship, to the only airlock. The eyes of the others followed us silently.

I knew I should save the dead woman's clothes, for cloth, trinkets, leather and particularly the imprex tape which still bound her broken body might be useful in the bare, empty lifeship.

But any suggestion of stripping the body before throwing it into space would clearly heighten feeling which was already too high. I'd be regarded as a grave-ravisher as well as a man who had made a mistake that killed Mary Stowe.

So Sammy and I left the body in the airlock, just as it was, closed the inside door and turned the wheel which opened the outer door. There was no sound, but the air in the lock shot out into space, sweeping all that was left of Mary Stowe with it.

The body had the same velocity as the lifeship and would travel on with it. The small additional thrust imparted by the violently escaping air, however, would carry it off on a tangent. Soon the lifeship and the body of the woman who had left Earth, alive, in it, would be miles apart. Then hundreds of miles. Perhaps, eventually, millions of miles.

We went back silently to the main room of the ship. Nobody seemed to have moved.

"All right," I said. "Since there's so much feeling about this thing — let's talk about it."

Harry Phillips looked up. His eyes were as kindly as ever. "Wouldn't it be better not, son?" he said gently. "You did what you thought was right. We don't doubt that."

He didn't, perhaps, but Miss Wallace didn't meet my eyes. Leslie seemed to shrink away from me, without actually moving. John Stowe, sunk in his thoughts, probably wasn't even hearing what was going on.

"Does anybody doubt," I asked, "that I had to do what I did?"

"Did you?" asked Miss Wallace bluntly, looking at me with resolution. "Did you have to? Did you *really* have to?"

I cast one swift glance at her. I hadn't thought this out. But it was obvious that I couldn't explain to them all exactly what the fuel situation was. Sammy, perhaps — I'd have to share it with someone. Not anyone else, for that would mean a voyage of even greater tension, a hopeless voyage, a voyage when it would be difficult to make anyone do anything hard or

unpleasant, since there would seem to be no purpose in it at all. So I said:

"You believe, then, that I chose ten people from over 3,000 and then started off by murdering one of them?"

"No," said John Stowe, dragging himself into the present with an obvious effort. "There's no question of it being deliberate, Lieutenant Easson. But my wife" — his voice quivered — "my wife is dead. Did it have to happen? Or was it . . . unnecessary?"

I understood perfectly what he meant. It would be easier to bear if it was an accident, something that couldn't have been avoided. What was torturing him was the thought that Mary might have died because of a small, careless miscalculation. *My miscalculation.*

"You'll have to take my word for it," I said matter-of-factly, trying to freeze the raw emotion that was in the air, "that it was necessary. It had to happen. We needed that extra acceleration. If I were doing it again, knowing someone would die, I'd still have to do it."

No one said anything, but they believed me. Stowe was nodding slowly, the dull anger and suspicion gone from the ache in his heart. The ache was still there, but it was a cleaner ache. And the others, after looking from him to me and back to him, were looking a little ashamed of themselves, ashamed of the ready assumption that because I had changed my plans I was to blame for Mary's death, ashamed that they had been so ready to think the worst.

"We always knew we had to leave the rest of Simsville behind," I pointed out. "Everyone else had to die if we were to have a chance. We accepted that, didn't we? Then let's try to think of Mary Stowe with the rest — part of Simsville we couldn't take with us."

"God damn the man who passed that couch," said Stowe through his teeth.

"He probably has," I said quietly. "Not many of the people who made the lifeships had a chance to go on one of them."

That seemed to be that. No one wanted to pursue the matter.

"Better get that imprex tape off, all of you," I said. "Roll it up carefully. We'll need it for the landing. The women can stay here and the men go down to the airlock."

Miss Wallace opened her mouth — to protest, obviously, that there was hardly any screening between the two places I'd mentioned. I waved her silent, rather impatiently.

"How much privacy do you think any of us is going to get this trip?" I demanded.

She looked round quickly, and seemed to see the force of that.

I had to tell someone the truth. If Pat Darrell had been along, it would have been her. As it was, Sammy was the only one I could talk to. I wasn't

sure yet about Leslie. The last time she and I had been alone together, back on Earth in those last tense, terrified days, she had tried to buy her passage to Mars, and I had lunged away from her in disgust. If Pat had lived Leslie wouldn't have been there at all.

I nodded to Sammy, not looking at Leslie, and we pushed off and guided ourselves into the control room.

"Sammy," I said, "I've got my troubles, you know that. Mind if I share them with you?"

He grinned. "No, Bill," he said. "I may grouse and swear and be bitter about things, but that's just the way I'm made. Sure, I'll help all I can, any time. What's on your mind?"

Something in the way he said it showed me that he was remembering Pat, too.

"Remember," I said, "how you once thought the lifeships were a cruel hoax? A myth designed to keep a tottering world comparatively sane while the real spaceships were granted peace to get on with their job?"

He nodded. "But you were right, Bill," he said. "I felt pretty low when I said that. It was just natural pessimism."

"It was more than that, Sammy," I said quietly.

I told him. I showed him my figures — all of them.

Given only eight weeks before the sun stepped up its output enough to make Earth a 250-500° Centigrade world, the governments of the world had had no chance to transfer their people wholesale to another planet. Space travel was too young. There were too few ships. There was too little time.

No, any way they looked at it, it was a simple proportion sum. Give a few people a good chance of getting to Mars safely, or a lot of people a very slim chance.

I didn't know whether I was apologizing for them or not. I don't know now. But look at it this way.

Back on Earth, at sea, a liner sinks. Nothing is left but one lifeboat and hundreds of people in the water. The lifeboat sails around and picks up people till the gunwales are nearly in the water. Then what? Others try to clamber aboard. Still more cling to the sides of the boat. What's the answer — let everyone drown, since everyone can't be saved?

Sammy was in no doubt. "The swine!" he said, his face white. "What's the use of giving people a chance that isn't a chance? Why didn't they build just as many ships as they knew could get to Mars and land there safely?"

I grinned without humor. "People will argue over that for the next thousand years," I said, "those who are left to argue about it. Me, I'd take the infinitesimal chance rather than no chance at all. But there's no use

talking about it now, Sammy. It's so. What are we going to do about it?"

"What *can* we do about it?"

I let myself float comfortably on the softest cushion imaginable — air without gravity.

"A lot, in theory," I said. "The regular ships will get to Mars all right. So will some of the lifeships. There will be variations, of course — some of them will be a lot luckier than we've been, some a lot less. For some it will be a simple, straightforward trip — and if they've no fuel left after they land, what does that matter? For others it must have been a 100 per cent impossibility from the word go.

"All right, there will be plenty of ships on Mars when we get there. They'll send up as many as they can to take people off lifeships that couldn't land safely, or help others down, or refuel them. . . ."

Sammy brightened.

"Or," I went on, "little as we have, we certainly have enough fuel to take up some sort of orbit around Mars, and wait for someone to do something about us. There's one space suit on board. Someone could land with that, and sooner or later a ship would come up and take us off."

Sammy, looking much happier, wanted to speak, but I ignored him and went on.

"Or again," I said, "if we do nothing at all, using no fuel, we'll find one of three things happening. We may see we're going to miss Mars altogether, and if that's so we'll have to use our fuel to correct the course. We may fall into an orbit naturally, without doing a thing. Or if we see we're going to crash on Mars, we can leave the drive to the last minute and then use what we have to land as soft as we can."

Sammy began: "But that's —"

"Still not much better than a thousand-to-one chance," I told him flatly.

He stared at me incredulously.

"I'm sorry, Sammy," I said. "I know I should have kept this to myself, but I'm not big enough. Let's look at those things. How many ships will there be on Mars — good ships, possible rescue ships? A few score, perhaps. And not too much fuel. How many lifeships? Hundreds of thousands. What are the few score going to be able to do for the hundreds of thousands?"

"I see," said Sammy bitterly. "Go on."

"Next, the orbit round Mars. Now it doesn't take much drive to edge a ship into an orbit round a planet. A skillful, experienced pilot could generally do it with a few seconds of blast. But, unfortunately, there are only about twenty such pilots in existence, and I'm not one of them. I was a radio officer, remember. I can't do it, Sammy. I'm ready to try, but I'm no

more likely to succeed than an untrained marksman is to hit a deer at 500 yards with one shot."

"I see that, too," said Sammy, his anger dropping to burning resentment against persons unknown.

"And as for decelerating safely on the fuel we have — why we can't do it is kindergarten mathematics. Roughly, ignoring Earth and Mars altogether, we have to do as much deceleration as we did acceleration. And we have only a fraction of the fuel to do it."

"So what do we do?" demanded Sammy bleakly.

"I wish I knew. Anyway, we have weeks to think about it. Perhaps we'll be lucky. We may be one of the few lifeships that the regular ships will be able to help. Or we may take up an orbit without even trying. But. . ."

Sammy nodded gloomily. He had dropped from cheerfulness to blazing anger to black resentment to something very close to despair. "But what?" he asked.

"But we can only hope for that," I said, "not count on it."

I grinned suddenly. "Cheer up, Sammy," I said. "We're not actually dead yet."

Sammy looked up sharply. "I'm not bothered about *that*," he said. "I can face the idea of dying as well as most people. I'm thinking of *homo sapiens*. Two billion living, breathing human beings waiting on Earth to be fried. And thousands who thought they'd been saved finding now that all they'd been given was a chance to die some other way. Thousands of units of eleven people on lifeships who know now they'll never reach Mars, who know they've been sold —"

"Nobody's been sold, Sammy. The lifeships weren't a cruel hoax, as you feared. They were what it was always admitted they were — just a chance to get to another world. . . ."

But Sammy wasn't listening. I left him there and went out to make my first check of the lifeship — my first, and probably last, command.

II

We found very soon that we had far too much time on our hands. I manufactured as many jobs as I could for the ten of us to do, but there was still too little to occupy us.

There was the job of looking after the hydroponics plant on which we depended both for food and for fresh air. I put Harry Phillips in charge there. He had had little or nothing to do with water culture methods before, but he knew plants. Forced by artificial sunshine, efficient aeration of the roots, the warmth of the lifeship and constant care, the tomatoes,

potatoes and roots grew incredibly fast in their compact trays. Starvation was not going to be one of our problems. Harry's main assistant was Leslie; she or Harry was always in the plant, finding something to do. That accounted for two people.

The water purifier also had to be looked after. From it came all the water we used, and into it all the water went back. Betty and Morgan were in charge of the machine. There wasn't much for them to do, and they seemed happy together doing it. I still didn't know much about Morgan and Betty. Clearly, however, they were very much in love, and wanted no companionship but each other.

Miss Wallace was in charge of cooking. Little Bessie helped her. Bessie was a lovely, happy child. I never regretted choosing her. She was utterly unspoiled, gay but not destructive. She had consideration and sympathy rare in anyone so young. It was when I thought of Bessie that I was most determined to get to Mars safely. Bessie was going to be a wonderful woman, and not merely a very beautiful one.

Jim Stowe liked to sit in the control room and pretend to be the pilot of a spaceship. So I made that his job. He was the lookout. We didn't need one, but he liked the idea and it gave him something to do.

That left John Stowe, Sammy and me. We helped anyone who needed help, and looked for more things for the others to do.

We kept Earth-time, calling one twelve hour period day and the next night.

On the third day a problem emerged. It was hot and stuffy, despite the fact that the hydroponics plant was dealing quite competently with the excess carbon dioxide in the atmosphere. Betty had a temperature, Morgan a streaming cold, and most of us had headaches and hot eyes.

I was in the control room explaining things to Jim when Miss Wallace came in.

"Run along, Jim," she said. "I want to talk to Lieutenant Easson."

Reluctantly Jim went. Miss Wallace surveyed me grimly, her cheeks flushed.

"Lieutenant Easson," she said formally, "something must be done about Smith and Miss Glessor. They are. . . ."

I had thought at first that she was talking about their health. When I saw her expression, however, I guessed what she meant.

"They're what, Miss Wallace?" I asked.

She blushed more violently. "Openly!" she said vehemently. "With two children about!"

I didn't make her put into words what Betty and Morgan were doing.

"Well, why not, Miss Wallace?" I asked gently.

"They're not married! And —"

"Probably," I reflected, "as commander of the ship I could marry them. But we've left the old world, Miss Wallace, and I don't think things like that are going to matter for quite a while."

"Decency and moral standards always matter," she declared indignantly.

"I suppose so. But I don't think they're involved in this case. Betty and Morgan love each other, and in normal circumstances they'd be married. It didn't matter until they knew they were coming on this trip, and then it was too late. Anyway. . . ."

I wanted her to see it, for if Miss Wallace saw it everyone else would. She wasn't narrow-minded — just strict and correct.

"You don't think an illegitimate child is damned, do you, Miss Wallace?" I asked.

"No, of course not. But that's not the question."

"Isn't it? We'll want as many children as possible. Frankly, there's going to be so few people in the new colony that one of the first things we'll have to ensure is that there's a big, healthy second generation —"

"Lieutenant Easson," said Miss Wallace warmly, "are you suggesting that we should do away with marriage altogether?"

"No," I said thoughtfully, "but I don't think we can insist on it. I think what'll happen is informal marriage. People will live together and say they're married. Even if they don't — if women have children without any sort of husband in the offing — I don't think we should object."

Clearly she hadn't thought it out. She didn't refuse to entertain new ideas. It simply had not occurred to her until then that the circumstances had changed so radically that new patterns of behavior might be required, and old ones abandoned.

"Perhaps you're right," she admitted. "I'll think about it."

III

I talked to Betty and Morgan later. They were quiet, shy, embarrassed by the attention they had caused, but not in the least ashamed of it.

There were no doors in the ship except the airlock, and the only privacy that was possible was the shielding provided by the water tanks, the hydroponics plant and other natural screens. Betty and Morgan had done their love-making as discreetly as possible, but that wasn't very privately.

"What are we to do?" asked Morgan resentfully. "Go outside into space?"

"We thought of speaking to everybody about it," said Betty, "but what could we say? It would be nonsense to ask anyone's permission. . . ."

"Of course," I agreed. I told them what I had said to Miss Wallace. They brightened, glad that Authority — that was me — didn't think they had done anything wrong.

"You mean we can just say we're married," said Betty, "and we are?"

"If you like," I said. I was having a good look at them for the first time. Morgan was tall and thin, very young and immature. He was a nice-looking boy — too shy, of course, but with a friendly grin nevertheless. Betty was very small and slight, a neat little figure with corn-colored hair and small, very white hands. She wore blue slacks and a yellow sweater.

At the moment Morgan's nose was red and his eyes watery; Betty was flushed and shivered frequently, her eyes too bright. They had chosen rather unromantic circumstances for their nuptials. But they insisted they felt perfectly well.

"Congratulations, anyway," I said with a grin, and went looking for Leslie. I was thinking more of Morgan's cold, Betty's temperature and the headaches of the others than of the question of informal marriage.

As I swam into the hydroponics plant Leslie grabbed the hem of her frock, which was floating airily somewhere in the region of her fourth rib.

"Doesn't make the slightest difference," I said. "Take it off altogether — haven't you ever worn a bathing suit?"

"Yes," she said, tucking her skirt between her legs, "but only in the appropriate circumstances."

"These are the appropriate circumstances," I explained what I meant. She considered it, and nodded. But clearly she had something else on her mind.

"Don't go," she said, when I made a movement. She was breathing hard, obviously nervous. "I want to talk to you — Bill."

I waited. I knew at least part of why she was nervous. The last time we had been together without other people around had been an incident neither of us wanted to remember.

"I'm not sure you understand why I threw myself at your head," she said, with an effort. "It's true, I suppose, I was trying to bribe you. I wanted to live — oh, I know I was quite wrong. I've thought since about what you said. I misunderstood you completely. I —"

She wasn't getting anywhere. "Must we talk about it, Leslie?" I asked quietly. "I'll forget it ever happened, if you like."

"I don't want that. I'm trying to explain . . . you see, I didn't know you. I wanted to live. I wasn't honest, like Pat. What was it she said? 'I just carry on being myself without trying to buy myself a place on the ship by being someone else.' I didn't believe that at the time, but I did later. Anyway, I wasn't like that, and I knew it. I wasn't as honest as Pat, but at least

I was honest with myself. I wanted to live more than anything. If you could be bribed, I was ready to bribe you."

She looked at me steadily, anxiously, trying to make me understand. "I thought it out carefully, and made sure I meant what I was doing. I had only one thing to bribe you with, and when I really thought of it honestly, it didn't seem to matter much to me. I know I was wrong — the question is, how wrong was I?"

"Not terribly wrong," I said, smiling faintly. "But I still think the least said about the whole thing the better."

"No," Leslie insisted. "Because if I meant it then, I should mean it now. Do you want me?"

I frowned. "That's mad," I said flatly.

"I don't think so," she said stubbornly. "It couldn't be a question of money, because money won't matter for quite a while now. But suppose it was money. Suppose I offered you a thousand dollars to do something, and you did it without taking the money. I'd still want to give you the thousand dollars. I'd feel you'd have to take it so —"

I burst out laughing. Leslie couldn't see the joke at first, but after a while she was laughing too. It was a ridiculous situation.

At last I said: "Leslie, I'm still turning down your bribe. I don't want you, you owe me nothing, and if you're trying to sell yourself I'm not in the market. Is that clear?"

"You're making a joke of it," she said, laughing despite herself, "and I was perfectly serious."

"Are you quite satisfied that you're not under any obligation to me?"

"Yes. It wasn't that, anyway, it was —"

"Right. Now that that's settled — Leslie, will you marry me?"

She stopped smiling abruptly and looked at me in amazement.

"If you feel you owe me anything," I said, "the answer's no. Or if you don't think you could possibly love me, ever. But don't say no just because you don't love me now."

"I do love you now," she whispered.

She couldn't, really; she hadn't had an opportunity. But if she thought she loved me, all the better.

We kissed, and floated in the air in each other's arms.

"I feel this is almost like sharing you with all the others on the ship," I said, "but we'd better set an example straight away."

I stripped to trunks and Leslie took off her dress, stockings and shoes. "Do you think this will help?" she asked.

"Not much. We'll have to do other things too."

We clasped hands, pushed off from a wall and soared into the lounge together.

"No," I said, when everyone looked up, startled, "we're not starting an interplanetary branch of the SunA. I think we should all strip, and if anyone wants to go naked altogether, I won't object."

They still stared. "Why has everyone a headache?" I asked patiently. "Why has Betty a fever? Why has Morgan a cold?"

Sammy, Miss Wallace and Leslie knew what I was talking about. No one else.

"The air in here," I said, "is kept fresh enough, but the temperature is going up and up." I pointed to the white panels on the walls. "That's neutralex, and it just doesn't conduct heat at all. It's rather too efficient, in fact — combustion's going on in all of us, we're cooking food, and none of that heat's getting away. So the temperature's going up a degree at a time, and it'll keep going up until we find some way to stop it."

"Taking off our clothes won't help much," Morgan objected, and sneezed.

"True," I said, "but it'll help a little. The unhealthiest conditions occur when the air is warm and motionless. The skin isn't cooled and dried as it should be. In here, the hydroponics plant handles excess carbon dioxide well enough, and the water purifier mops up quite a lot of water vapor from the atmosphere. But the circulation set up by the hydroponics aeration plant is too slow to help us much when the temperature's so high. What we want to do if we can is step up the circulation and bring down the temperature."

Sammy threw off his sweater and pants.

"Meanwhile," I added, "if we want to avoid colds, itches and headaches, it'll help if we peel and keep moving as much as possible."

I caught Sammy's eye and he came over and joined Leslie and me.

"Wasn't there any provision for this?" Sammy demanded.

"Not that I know of. There's nothing we can use as a fan, but we may be able to lower the temperature."

"How?"

I swam to the wall and tapped the white panelling. "This neutralex," I said, "is simply a barrier cutting off all heat. There's no chink in it. But if we make one, we'll radiate heat at that spot."

Leslie frowned. "Space is at absolute zero, isn't it?" she objected. "Seems to me we'll lose too much heat too fast."

I shook my head. "Behind the panels is the shell of the ship. It's absorbing heat from the sun, more or less equalizing it through its whole volume by conduction, and radiating it again on the side away from the sun. Remember,

there's no conduction or convection, only radiation. And balancing any heat we radiate, there's the quite considerable amount of heat radiation we're getting from the sun."

We set to work unscrewing one of the panels. As I worked, I glanced now and then at the others behind us in the lounge to see how they were reacting.

Perhaps I gave this too much importance, but as I saw it, though it might not make an enormous difference whether everybody on the ship stripped down or not, this was an index of their adaptability. They were being asked to change their behavior and ideas slightly, because circumstances had changed.

Immediately Sammy and Leslie had seen what I was getting at, they agreed, they adapted. No argument. Jim Stowe and Bessie too — Jim looked at his father, received no guidance, and threw off his shirt. Bessie didn't care in the slightest. She had no idea why we were taking off our clothes, but she obliged too, and nobody stopped her. She left only her white rompers, and then, after a long, thoughtful stare at Leslie, began gravely to fashion herself a brassiere out of the sash of her frock. To Bessie this was another game.

But the others whispered together and showed no sign of following our example. Well, if they didn't believe what I said, or really didn't think it mattered, I didn't mind. If, however, they were stubbornly refusing to change their ideas, it didn't augur well for a future in which they might have to do that every day for years.

IV

It was on the eighth day that we found the prophecies had been right and the sun had really stepped up its output.

We had licked the temperature difficulty, more or less. We removed enough panels to set the balance right, and I tinkered with the hydroponics aeration plant to increase the circulation in the ship generally, watched by an anxious Harry Phillips. The hydroponics plant was his baby, and he didn't quite trust me with it.

Despite my assurances, Leslie and Sammy remained afraid that we would all freeze if we left the panels off — until at last, after it had been done, they saw that a nice balance had been achieved, and the temperature went neither up nor down. They also, incidentally, remained convinced for a long time that having cold spots on the walls would set up a strong air circulation and we wouldn't have to bother about that.

I explained carefully that it wasn't the expansion of heated air, or the

contraction of cooled air, which set up circulation. It was a question of density — and on the lifeship, density just did not exist. Density is mass per unit volume; volume still existed, could still change, but there was no weight. Heat air on a weightless ship and it certainly expands, but it doesn't rise. It expands outwards, evenly, and the compressed air round it tries to push it back evenly. There's no draft — light a match where there's no weight and no air circulation, hold it still and it promptly goes out.

When we had achieved our temperature balance, this was clear enough to Sammy and Leslie. We had a slow circulation, without which the measures we took wouldn't have been effective at all, but only by making the air circulate, pushing it around. The cooling areas had no effect whatever on the actual circulation of the ship; on the actual movement of air it had some, since as the air cooled it contracted and dragged more air in. These, however, were only eddies and had nothing to do with the movement of air round and round the ship.

On the eighth day our temperature control was functioning and checked. There had been no significant variation in more than twenty-four hours.

Sammy, Leslie, the two children and I were still going around wearing as little as possible, and we were still the only ones who were. Morgan's cold, Betty's fever and the general headaches had all cleared up, so perhaps the other five thought it was now unnecessary to follow our example.

Then suddenly it was hot. It couldn't have been sudden, really, but it certainly seemed so. The temperature had been adjusted so that while it wasn't cold it was always cool, certainly for those of us who were lightly clad. Leslie was in the hydroponics plant, Sammy and I working on the water-purifier, and we didn't notice the change until we found ourselves sweating.

"The sun!" Sammy exclaimed.

We knew at once what he meant. Eight days ago had been deadline; the sun's change might have occurred when it was supposed to, for all we knew. It was behind us — the only way we had of looking at it was putting on the space suit and going out at the airlock to look back.

The change inside the lifeship, however, was so marked that we knew almost to the minute when the sun entered its new phase. The alloy outer skin of the ship, of course, was absorbing extra heat; the balance we had created was gone, and the temperature went up again.

That didn't matter much. We could handle that problem as we had handled it before. But something else did matter.

Earth was beginning to die. Already the extra heat was searing it. I saw Sammy's eyes cloud and knew what he was thinking.

The polar icecaps were melting. Elsewhere, clouds of water vapor were

rising from every open body of water. Soon lakes would bubble and gurgle; real steam would begin to rise. The ground would crack and leaves would shrivel. There would be earthquakes, as the wave of heat tried to equalize itself through Earth's brittle crust.

Nudists were ecstatically offering their bodies to the new sun, glorying in the new warmth in cold spots, throwing away furs and heavy coats. In the warmer places the SunAs were arching back luxuriously in the new blinding heat — and in a few minutes screaming as it blackened their skin.

Wood houses were catching fire spontaneously, bridges buckling, girders pushing their way through masonry and plaster. Parched winds were rising, sweeping hissing steam along city streets. Lamp standards buckled, water tanks burst, glass cracked and fell in splinters.

People were running, then tripping as the sidewalks split, screaming as their clothes began to smoulder. People were dashing into bathrooms, turning on the cold shower and being scalded by the boiling water and steam that emerged. Others, unthinking, were running for lakes and pools, unaware that the water was already well on the way to being steam. Once more the astonishing thing would be that human beings lived so long, still moving, trying to survive in a world where every tree was blazing. All over one side of the planet people who were dead, their bodies roasted, still moved and shrieked and strived for blessed coolness which no longer existed.

Now even the polar regions would be hidden under boiling clouds. Down in the depths of the sea there was still coolness, while the waters above boiled and tried to leap into the atmosphere. Some deep sea fish would still be swimming about unaware of disaster.

People on the slopes of high mountains were climbing higher and higher, and then finding abruptly that there was no escape. Even the icecaps of high mountains were turning to steam.

Hurricanes were sweeping the world, for the heat was still uneven. But they weren't cold gales — they were tearing blasts of hot air that could lift a stream bodily and never let it down.

Coal pits were burning, grassland was burning, forests were burning, whole streets in towns were ablaze. Yet there would still be freak spots in this mad world where people and animals out in the open were still alive, and water existed as water, not steam.

Now there would be volcanoes where there never had been volcanoes, the ravaged Earth adding her own contribution to the devastation. Perhaps Atlantis had risen again and was dry as a bone in a matter of minutes.

The side of Earth where it was night was having a very different, but no less frightening, experience. Tremors, sudden winds, a hot breath from somewhere, no more. Time to prepare, for obviously something was hap-

pening, something worse was going to happen; suspense, not actuality. A few minutes of reports from the other side of the world, jamming the wires and the ether — then silence. More tremors, earthquakes, the first tidal waves. And all the time the Earth was spinning, bringing millions of square miles of undevastated land into the glare, tilting seared land and boiling sea into darkness and comparative coolness — too late.

Then storms, pouring rain as water-sodden air swept round the world, cooled, and unloaded millions of tons of water on the dark land and sea. Still the world turned, giving more and more of its surface to the killing heat. Hot hurricanes were following the cool monsoons on the dark side. Already, in the night, the quarter of the Earth that remained was feeling the burning breath of the new sun. The moon was strangely bright.

The part of the Earth which had been in the glare of the sun since the beginning was by this time cauterized, sterilized by heat. Nothing remained, not animals, not birds, not reptiles, not insects, not plant life. And there was no liquid for fish to live in. The bodies of the creatures which had died, if not burnt, were desiccated.

But even in this part there was still life, human life. The Troggs lived — the scientific cavemen, the people who had known what was coming and prepared for it, digging deep and very special holes in the ground.

This, however, was only the start. Even when the Earth turned and there was not a square inch of ground which had not been seared by the new, more passionate sun, it was no more than a beginning. The mean temperature of the Earth, through all its mass, probably hadn't risen one degree yet. . . .

V

What brought me back to the lifeship, which was my concern, from the doomed Earth, which wasn't, was the prosaic fact that Harry Phillips was taking off his shirt.

I forced my attention back to the present, the lifeship. Earth was the past — we had known that since we left it.

It wasn't unimportant that Harry was taking off his shirt. Given the lead, Morgan Smith started to peel off his clothes too. They had thought in their various ways of the world they had left, and suddenly, perhaps for the first time, they realized they had left it and that its standards, its way of life and the things it demanded no longer had any real meaning.

It was hot in the lifeship, stifling hot; Bill Easson was probably right after all. So they stripped, and another part of Earth died. We were no longer men and women of the third planet, the green world.

As Sammy and I unscrewed more panels on the sides furthest from the

sun, there was even laughter and a suggestion of horseplay. Miss Wallace wore sensible underwear, of course. While it didn't positively deny sex, it made it look improbable. John Stowe grinned fleetingly, as he looked at her — the first time he had smiled since Mary died. Morgan was flushed with embarrassment until he realized that there was no need for it, and he grinned too. Old Harry was quite unconcerned. He, at any rate, had held out for so long only because he saw no need to do as I suggested. Betty took off her slacks, but felt it necessary to explain, embarrassed, that she couldn't take off her sweater because she wasn't wearing anything underneath.

For some reason everyone thought that was very funny. Betty went redder and redder, then impulsively caught hold of her sweater to tear it off. I watched with interest that was not carnal. If Betty could do that, something had really happened.

But she didn't, of course.

There was a slightly different attitude among us after that. For one thing, Mary Stowe's death no longer seemed to be hanging over us. We all, even John Stowe, found it easier now to think of her as one of the casualties of the disaster. There had always been a lingering doubt about the truth of the scientists' predictions. We might be making fools of ourselves, and Mary might have died for nothing.

Now that was gone. We could tell from the conditions in our own little ship that all the scientists had said was justified.

The casual marriages of Morgan and Betty, and Leslie and me, were now accepted completely. Miss Wallace made a point of telling me that she was satisfied I was right. In fact, she said a little wistfully, if there was any question of the situation arising in her case — which, of course, there wasn't — she would gladly marry in the same conditions. Or even, she said stoutly, have children without marrying.

It was the knowledge of what had happened on Earth that did that. There is a feeling for race survival in every human being, and not only survival, but strong survival. The thought of the tiny proportion of the human race which would be left stimulated this feeling in everyone. The way people casually mentioned having children showed how their thoughts had been directed.

Morgan and Betty asked me — rather late, I suspected — when we would be safely down on Mars at latest, and whether it was all right to start children. I said yes, I thought so. Leslie said the same thing. Miss Wallace observed in some surprise, after long calculation, that she could still have nine or ten children. I thought that was rather an overestimate, myself. Sammy dropped a remark or two about things he was going to tell his children. Harry Phillips wondered if old people could get together on a one

child basis, so that a woman who might have another child could be partnered by a man who was past his best, and neither could be a drag on the reproduction of the younger folk. Clearly he had set his heart on a young aunt for Bessie. John Stowe remarked that Mary wouldn't have been able to have any more children anyway.

The attitude of the people on the lifeship still wasn't all it might be, however.

"It will be different on other lifeships," I told Leslie once. "Some crews will be finding their lieutenant turning into a little dictator."

She grinned. "I can't see you as a dictator. Your way's right, Bill."

"No, their way's right," I said. "Suppose I had to get everyone to do something in a hurry. Would they do it? Only if it suited them. They'd argue. They'd complain. Some would do it, some wouldn't."

"And I still think that's right," Leslie declared. "You must, too, Bill."

"How do you work that out?"

"You picked us. If you wanted slaves you'd have picked slaves."

I had to admit that.

But I still had a point, I felt. I didn't want to give the example of the attitude I thought was right, not to Leslie.

I had married Leslie, but she didn't matter to me. She didn't figure in my calculations. That didn't mean that later, if there was a later, I wouldn't love her and cherish her and build my whole new world about her. Meantime, I was in charge of a spaceship, and having a girl was an irrelevance. If something dangerous had to be done that only Leslie could do, I wouldn't hesitate an instant before telling her to do it.

It wasn't a question of not having time for her. I had plenty of time. If it hadn't been for the fact that she still spent a lot of time in the hydroponics plant, she'd be with me twenty-four hours of the day. What I couldn't afford to give her was attention.

We didn't get the temperature in the ship as low as it had been before, not for a long time. The hull was absorbing more heat, conducting it round, and couldn't radiate away as much from inside.

I don't know whether suggestion came into it, but apart from that possibility we proved to the hilt how much health depends on air circulation, temperature and humidity. The water-purifier's condensation unit went on strike for a day or two, and by the time we had it working again we were all like limp rags and would have lost pounds in sweat if there had been any way to measure that.

Morgan drifted all over the ship with the air current as he slept one night. He woke with a headache and fever, and for five days he had the works — cold, sore throat, headache, cough, fever. There may have been

other causes, but the high temperature and absence of air movement (since he went with it) seemed to cover it.

It was Jim who suggested something I should have thought of long since. One day as he and I were in the control cabin, companionably silent, he said: "Why can't we see any of the other ships, Lieutenant Bill?"

He always called me that.

"The other lifeships, Jim?" I asked.

"Yes. There's millions of them, aren't there, all going the same way?"

"Not quite millions, Jim. Why can't we see them? Well, look. Remember all those ships at Detroit? They all took off more or less together, going from the same place to the same place. Yet I'll bet there wasn't one collision. At the end of ten seconds each ship's done about two miles. Even if you point another ship after it then and *try* to ram it, you can't do it."

I waited while he worked that out for himself. He was an intelligent kid, more intelligent than any of the adults except Sammy and Leslie. Then I went on: "Between Earth and Mars now there should be hundreds of thousands of lifeships. But the volume of space in which they may be is about — oh, say 50,000,000 cubic miles. I'm sure I could make it a lot more if I tried."

I grinned at him. "So if you think of it," I said, "we're not likely to see many of the others, are we?"

"That's a pity," said Jim thoughtfully. "If there were others close, we might be able to get fuel from them."

I jerked convulsively. "How do you know we need fuel?" I demanded.

"Saw it on the meters," he said simply.

I hadn't thought there was the slightest risk of that. It wasn't a simple story that could be read from the meters at a glance. The boy must have done a lot of thinking and calculation before he could have worked out for himself what I had been careful never to hint to him.

"Have you told anyone?" I asked quickly.

"No," said Jim. "I guessed you would tell them if you wanted them to know."

I nodded. "Jim," I said, "you're going to be a useful man in the colony. When the rest of us are old, you'll be helping to run things. Just keep thinking things out as you've been doing, and you won't find much that'll beat you."

The boy flushed with pleasure. Naturally enough, I was his hero, and anything I said was worth something.

"Fuel from other ships," I mused. "I wonder."

The thought, or a germ of it, had occurred to me before and had been abandoned. Perhaps I had given it up too soon.

"I did think of that, Jim," I said. "Know why I gave up the idea?"

"Because we can't see any other ships and there may not be any in millions of miles."

"That and one or two other things. Even if there was another ship, we'd have to use fuel getting to her. At least, just now, we're not using any."

Jim nodded seriously.

"And apart from that, this other ship wouldn't have much fuel either. Certainly none to spare. What would we do, fight for what it had? Take the people in the other ship aboard? If lifeships could hold twenty, there would be twenty in them. Anyway, how would we transship them? Each ship carries only one space suit. . . ."

But as I went on detailing the objections it seemed more and more that we should at least look into the matter.

"Jim," I said, "go and get Sammy and Leslie."

He came erect excitedly. "Can I come back with them?" he asked.

"Sure — you're the assistant pilot, aren't you?" I stopped him as he was about to dive through the doorway. "Don't let anyone know there's anything going on," I warned. "Be casual."

He went more slowly.

Leslie and Sammy were in the control room with us in two minutes.

I hadn't told Leslie about the fuel situation, but she didn't turn a hair when I did tell her.

"I guessed it," she said.

"I wonder if anyone else has?" I said. "Here's four of us who know about it. That only leaves six who don't. Do you think I'm right to try to keep it secret?"

"As long as you can," said Sammy. "But when you can't, the others may as well know the truth. I don't think things would be as bad as you believe, Bill. They're good people. They wouldn't go to pieces."

We discussed Jim's suggestion. I asked him to state it himself, and it was obvious how proud he was to be included in our council.

"That's all very well," said Sammy. "But since we can't see any other ships . . . ?"

"We haven't tried," I said. "We only have an angle of vision of about 150° here. The first step is for me to go out at the airlock in the space suit and scan space behind us. There may be a ship within a hundred yards."

"Not you," said Sammy definitely. "Me. There may not be much risk, but if anything should happen to the man who goes out, he'd better not be the one man who can operate this ship."

I nodded. "No time like the present," I said. "Let's go now."

The others didn't pay any particular attention to us as we went through

the lounge. Sammy and I or Leslie and I were always working on something. There was no indication that there might be anything special about this.

We started to put the spacesuit on Sammy. The hydroponics plant was between us and the other six; they might see us, but we couldn't help that.

"You'd probably be better with your clothes on for this," I said. "But you needn't stay out long."

He had the whole suit on except the helmet when we discovered something which had been missed when we checked the suit.

The helmet wouldn't fit on the suit — not with Sammy's head in it. It was flawed, like the acceleration couch which had broken, like hundreds of other things, probably, in thousands of other lifeships. The outside was perfectly machined, the heavy steel base and the tungsten glass face-plate were perfect. Everything was perfect, except that inside the dome was a jagged, irregular lump of metal that rested on the top of Sammy's head and wouldn't let the base of the helmet meet the ring on the suit. There was a gap of four and a half inches all the way.

Sammy, who had been quite even-tempered for a long time, forgot Leslie and Jim and swore long and bitterly.

We should have tried the helmet on our heads before, of course, instead of deciding it was all right because it looked all right. But there wasn't any more we could have done about it then than we could do about it now.

I tried it on my head. The space between base and ring was even bigger.

We had hopes of Leslie — the gap was smaller and it seemed for a moment that if we padded her shoulders so that all the free space was at the top of the suit we could force the ring on it high enough to meet the base of the helmet. The arms were the trouble. Some suits have mechanical arms operated from inside the suit, but not this one. True, we could get the suit on Leslie with her arms pinned at her sides. Then, however, she would be completely helpless, unable to operate even the airlock, and certainly not the propulsion unit. If she went out like that she would fall into space and be lost.

"I don't know," I said, "whether to laugh or cry."

"I do," said Sammy gloomily. "You three cry, and I'll laugh."

Sammy had the misfortune to be a tragedian with all the gestures and expressions of a comedian. Leslie and I grinned, and Jim gave a surprisingly adult chuckle. Both Jim and Bessie always found Sammy a great joke.

I felt better for a moment, but only a moment. I hadn't taken the matter as seriously as Sammy at first. I was something of a handyman; the thought of a little metalwork didn't disturb me in the slightest. However, as I ran over in my mind everything we had in the empty, naked lifeship, my face changed, and Leslie noticed it.

"Isn't there *anything* we can do?" she asked.

With even a hammer and chisel we might have chipped the flaw away in time. We could improvise a hammer, but what could we use as a chisel?

"You don't need to do anything," said Jim earnestly. "The suit will go on me. I'm sure of it."

I looked at him thoughtfully. "That's probably true, Jim," I said slowly. "But you don't mind if we try a few other things first?"

"Oh, I don't mind," Jim said confidently. "But it'll be me all right. You'll see."

Sammy and I scouted round the whole lifeship, looking at everything, picking it up and trying it. Practically all the loose metal objects were thin aluminum.

We abandoned all idea of secrecy. We showed the helmet to the others and asked for ideas. A host of impracticable suggestions were immediately forthcoming. We laughed at some of them — it was all great fun, a sort of parlor game in which we all joined, not Hunt the Slipper but Who Can Wear the Space Suit? We tried it on everybody, with much hilarity.

With Betty we nearly made it. The helmet and its fitting actually met. However, that was the limit — tightening it down could only drive the metal in the dome through the top of her head. We thought of an airtight collar above the ring, but there was no way to make one. We chipped at the metal with all the substitutes for a hammer and chisel we could find, and managed to scratch it, no more.

Someone suggested acid, and by pooling our knowledge we found that hydrochloric acid was hydrogen and chlorine, that you could make it with salt and sulfuric acid, and that you could make sulfuric acid with sulfur trioxide. Which was very interesting, but didn't help, since none of us really knew how to do it, and we couldn't risk tampering with the hydroponics chemicals and the water-purifier to get the stuff.

"It looks," I said at last, after we had tried everything we could think of, "as if you're right, Jim. It's you or little Bessie."

"What's that?" asked Stowe sharply.

And it wasn't a joke any more. As Sammy had said, though there wasn't much danger in going outside a ship in a spacesuit, there was always a risk. A score of things that we couldn't check any other way might turn out to be wrong with the suit. Jim might be blown out with the air. The lock might stick. The little things that might happen would do nothing to a spaceman, but they might well be fatal to a thirteen-year-old boy.

Theoretically I could give any orders I liked, and they had to be obeyed. But I couldn't let Jim go out unless his father agreed. After all, Stowe had already lost Mary.

I told them we needed fuel. Though I didn't say how serious it was, I made it clear our chances would be much better if we could get some from somewhere. And we had just demonstrated that any space suit work that had to be done, Jim Stowe would have to do.

"No!" exclaimed John Stowe, as I expected. "Mary's dead — now you want to risk Jim!"

I waited. I saw Stowe struggling with himself. "I'd go," said Stowe at last. "But not Jim — please, not Jim."

"You can't," I told him. "If it were possible, we'd do it ourselves. Only Jim can do it — or Bessie. Do you want it to be Bessie?"

It was Jim himself who swayed the balance in the end. "Please, Dad," he begged. "Can't you see I've got to do it? But I won't if you say no."

I wasn't quite honest about all this. I couldn't afford to be. There was small risk in sending Jim out to have a look back the way we had come. But if he did happen to see another ship, and if we decided to contact it, Jim would have to do it. And that would be very dangerous indeed.

I knew that if Stowe said yes once, he'd have to say it twice. This wasn't just his permission for Jim to do a simple, fairly safe job. It was his agreement for Jim to do any space suit job that was needed, no matter how dangerous.

He didn't know that. He said "Yes." And we began to get Jim ready.

There was no trouble. Jim was out a long time, but he battered on the hull occasionally, as I'd told him to do, to let us know that all was well and he was just taking his time. I was as impatient as Stowe, asking myself what Jim could be doing all this time, and wondering, unworthily, whether he wasn't just playing, pretending to be a spaceman doing a dangerous repair job on a damaged ship.

But then I remembered how careful Jim was and realised that he wouldn't come in until he felt absolutely responsible for what he had to say, and could tell us, not "I think," but "I know."

I said this to Stowe when he spoke anxiously. He seemed comforted.

"You like Jim, don't you?" he said.

"I'd rather risk Leslie than him," I told him. Leslie heard that. She smiled at me approvingly, but I saw she didn't believe it. Leslie wasn't an anxious, jealous wife. She wasn't unsure of herself, or me. I might not love her as some men had loved some women, but there were already strong ties of affection between us, and she knew it.

What I said was true, nevertheless. I'd rather risk Leslie than Jim. Leslie would play her part in the new colony, if we reached it, and play it well. She would never be, however, the asset Jim might be.

Jim came in at last. His teeth were chattering as we helped him out of

the suit — the big suit, apparently, absorbed less heat from the sun and radiated more than the hull of the ship.

"There's a lifeship not more than a few miles behind us," said Jim clearly. "I waited until I was sure it was moving the same way and at the same speed as us. I couldn't see anything else anywhere that could be a ship."

I almost refused to believe him. This had just been something to try, and when it duly failed we'd be no worse off.

"You're sure?" I asked foolishly — obviously he was sure. The others began to chatter excitedly, glad to know we weren't as alone in space as we'd thought. I grinned at Sammy. "What has the voice of doom to say now?" I asked.

"Nothing. It's his day off," said Sammy apologetically.

"The sun," Jim told us, puzzled, "looks very small and far away."

VI

There was really something to think about now. Did we want to contact the other ship? How was it to be done? Should we try to communicate with it first?

If we were going all out for contact with other lifeships, I could try to turn ours so that it was facing back to Earth but flying on in the same course. Then we could spend hours in the safety of the control room scanning space for other ships. We might easily find some. Space is clear — vision without the impedance of atmosphere is so sharp and clear that we might see the pinpoint of reflected light that meant a lifeship hundreds of miles away.

That was almost out of the question, however. The regular ships have gyros and jets that can turn a ship without interfering with its line of flight, but not the lifeships. Anyway, sooner or later I'd probably have to turn it.

"Seriously," said Sammy, when he and I were alone, "has Jim much chance of getting to that other ship and back in the space suit?"

"Oh yes," I said. "That's easy enough. Depends on who's in the suit, of course. If it had been Betty, say, I don't think I'd have let her try it. But though Jim's young, he's got guts and brains. That's not the problem."

"Then what is?"

"The other ship. There's people on it, alive or dead. Another lieutenant. People who want to get to Mars. Suppose they have no fuel left at all. Suppose their hydroponics plant isn't working, or their water-purifier. Or suppose they have illness aboard. Suppose —"

"Don't suppose any more," said Sammy bitterly. "I see. It's like everything else since this impossible trip began. Nothing right, nothing as it should be. Nothing but difficulty, things going wrong —"

"Hold on, Sammy," I said, laughing. "Count ten, and if that's not enough, count a hundred. We've been very lucky indeed. We had a perfect take off, so perfect that I didn't have to do any course correction — it was never wrong. No trouble with the hydroponics plant, nothing we couldn't put right on the water-purifier, no leaks, no failures, no illness to speak of, no fights, no quarrels, nothing we couldn't solve except this thing that we may be solving now. Then even when the space suit was wrong for the people who should have used it, we had an excellent spaceman to take over. And when we think of contacting another ship, we look out the back door, and there she is!"

"Maybe," said Sammy morosely, "but you didn't mention Mary Stowe dying and. . ."

"And what?"

"Oh, hell," said Sammy with a reluctant grin. "Get on with it."

We discussed the problems painstakingly. Sammy, his pessimism gone for the moment, agreed that despite everything against it, we had to contact the other ship.

Leslie agreed too, when she came into it. "But have you worked out just what you're asking of Jim, Bill?" she asked gravely. "He's got to deal with a whole lifeship complement alone — speak for us, decide for us. I mean, he'll be there, and we won't. He'll have no one to ask, no one to help him. And if for any reason at all he doesn't come back, we can't do a thing. We haven't another suit. He could get back to the airlock and suffocate there, for all we could do to help him."

Sammy looked a little ashamed of himself. That was the crux of the matter, not the objections he had made.

"Let's put it to Jim," I said.

"No," Leslie objected. "We know what he'll say. He'll do it. But he's only a child, Bill. We have to be careful what we ask him to do. Little Bessie would walk trustingly out of the airlock without a space suit if you asked her, but the fact that she did it willingly wouldn't relieve you of any responsibility."

"I know," I said. "But from the standpoint of pure reason there's only one answer. If Jim doesn't go, we haven't much chance. If he does, the chances of all of us, including him, may go up a lot. We've burned our boats by telling the others we need fuel. As you say, Leslie, we know how Jim himself will feel about it. Let's call Stowe into this, shall we?"

Poor Stowe was in a terrible state. We couldn't conceal from him any of the dangers. He tried to speak, but didn't know what to say. As I'd known at the time, I'd hamstrung him when I got him to say yes before.

"I wish there hadn't been a ship near," he muttered at last, not looking

at us. "Then we'd have had to make the best of it. But now. . . ."

I knew he felt it too. We had gone too far in this matter to go back. After all, the other ship was there. We could almost feel it behind us, following us; we couldn't forget it or pretend it wasn't there.

"Look on the other side," I urged, wishing Leslie wasn't watching me. "Suppose Jim finds fuel. If he does, if there's enough — our worries are over. Ships don't crack up in space, you know that. All they ever have to worry about is taking off and landing. More fuel, and we're safe. Jim too."

"If he was your son," said Stowe with an effort, "would you let him go?"

"Yes," I said without hesitation.

"I believe you. We need this fuel?"

Oh, let it go, I thought. "We have to have it," I told him.

Stowe squared his shoulders. "Then there's nothing more to say, is there?" he said, trying to smile.

VII

We packed Jim up in warm clothes, checked every part of his suit, the tiny propulsion unit and the air tanks. I made sure that he knew what to do in every emergency I could think of, told him all about the composite fuel we needed — what it looked like, how we'd handle it, how much we needed; I impressed on him again and again that he was on his own and that anything he tried he had to manage himself.

I stopped at last when I saw that though he was excited, he had a pretty good idea of what he was doing, and any further instructions would only be an encumbrance to him.

I knew from the way Stowe said goodbye to him that he was certain Jim would never come back. He was fighting the idea for all he was worth, but it had taken a firm hold on him.

I'd never believed there could be as much tension among us as there was when he was gone. Normally our life was easy, lazy. Some of us who didn't want to get out of condition or fat — Sammy, Leslie, Harry, Miss Wallace and I — exercised as much as we could in the absence of weight. But for the most part we relaxed and slept or dreamed or thought or merely drifted about. All of us had found hours passing in the apparent space of minutes. Tension didn't exist as a normal part of existence.

But whether we were concerned about Jim himself, about what he was trying to do, what he might find or what might happen to him, the result was some surprising things.

When Bessie pulled at Leslie to tell her something, Leslie snapped, "Don't

bother me just now." Bessie wasn't hurt — she merely stared at Leslie in wonder. Leslie made a gesture as if to caress the child and tell her it was all right. Then she remembered Jim and frowned anxiously again.

Sammy, who rarely clowning, was swimming about grotesquely in the air. He pulled faces at Bessie, and she forgot the strange impatience of Leslie and laughed delightedly.

"I wish I could have gone," said Betty.

"What could you have done, poppet?" asked Morgan teasingly. "It's not a job for a pretty little baby like you."

"It's a job for anyone who can do it," said Betty warmly. "That's why Jim's gone."

"Might have asked him to go on back to Earth while he was at it, and see what it's like there now," said John Stowe, and laughed as if he had made a very good joke and had only just fully appreciated it.

Sammy swirled round the whole group, his face screwed into a fiendish mask, and Bessie screamed with pleasure.

"I didn't want one of those hard, capable girls who do things like men, honey," said Morgan affectionately.

"You wanted someone like me, someone who's no use for anything?" asked Betty with a tinge of resentment.

"Oh, I wouldn't say you're no use for *anything*," said Morgan meaningly.

"That's all you care about me."

"For heaven's sake! I only said —"

"I heard what you only said. And I know what you only meant. I'm just someone to sleep with."

"Oh, go chase yourself."

"Hold it, kids," I said wearily.

"I'm not as useless as you think," Betty said.

"Well, it seems to me you're being pretty useless at the moment, darling. When you go on about something I never said you're about as useful as a sick headache."

"It's nice to know what you really think of me, anyway. It's nice to get at the truth. I should be glad I'm useful for something, I suppose."

"Even at that," said Morgan, "you're not so hot."

I don't know who hit whom first. I wasn't watching them. We stared for a moment — they were so close, so quiet that we couldn't imagine them fighting, even after the build-up they'd been giving themselves. But they were certainly fighting. Morgan slapped Betty's face with savage force that sent her flying across the lounge and him back against the opposite wall. Betty, instead of bursting into tears as we immediately expected, threw herself at him and struck at his face ineffectually. Morgan hooked his foot in

the frame of one of the couches and raised his arm high, a maniacal expression on his face. I dived from the wall and butted him in the midriff with my head as his arm came down. He spun crazily in the air, nursing his ankle, and I bounced back from him.

Betty burst into tears then. There was an immediate reconciliation, and no one said much about the incident.

But I looked on Morgan with some suspicion after that. Back on Earth, if a man tried to interfere with a girl and her escort killed him with a bottle he happened to be holding in his hand, he might get off with a light sentence. But if he waited to light a cigarette, then pulled out a gun and shot the other man, it would be a death sentence.

It seemed to me there was that essential difference in what Morgan had done. If he had thrown himself at Betty and battered her, I could forget it. There was something unpleasant, however, about the way he had anchored his foot so that he could smite the girl with all the power of his body unhampered by weight. I didn't know where he was going to hit her, but he could have killed her with a blow like that. The presence of mind he had shown in his act made it startlingly sadistic.

And then Leslie started looking for a fight too. "You shouldn't have let Jim go," she snapped at me. "A child like that. . . ."

So I was the only one responsible. I had thought we all agreed that Jim had to go. "Can it, Leslie," I said as pleasantly as I could. "Suppose — just suppose — he's finding us more fuel? Try thinking of that, will you?"

"Fuel, fuel — you've got fuel on the brain."

"So I have. People need it, you know, to fly spaceships. Even me. And that's what I'm trying to do at the moment."

"The man with one idea. I believe you'd sell me, too, for this precious fuel of yours."

"Sure I would. Who are you that you shouldn't be sold?"

"For the love of God!" Stowe shouted, his nerves worn raw.

"Sorry, John," said Leslie quickly. "Sorry, Bill. Let's all shut up, shall we, before we start wringing each others' necks."

"Amen," said Sammy, and looped the loop. We fell into an uneasy silence.

No, it wasn't pleasant waiting. I knew Jim would be gone a long time anyway — the most economical use of his little propulsion unit was merely to put himself in a slow drift toward the other ship and wait patiently till he got there. But that didn't prevent us worrying, long before he could have reached the ship.

Morgan and Betty went out of the lounge together. I looked after them, frowning — if they fought again, and no one was around to stop him, Mor-

gan in his wild rage might do something we should all regret. It was unlikely, however, that their reconciliation could last such a short time.

The first moment when Jim might reasonably have returned came and went. I wished there was something I could have set everyone to do. I thought of Morgan and Betty, and wished I could go away with Leslie and pass the time in her arms. I looked at them, smooth and cool, and ached for her. Leslie wanted it too, I saw. But any moment now Jim should be back. He was approaching the limit of his air supply.

John Stowe said as much, suddenly admitting his anxiety.

"You know Jim," I said reassuringly. "He'll wait as long as he can, making sure the job's done."

"How long are we going to wait, before we admit he isn't coming back?"

I answered calmly. "We needn't start thinking along those lines for quite a while yet. He doesn't need as much air as an adult, and for the most part he won't be active."

"But —"

"Remember when he was out before? Remember how he took his time, making sure?"

"I'm going to the airlock," said Stowe abruptly.

"Oh, all right. I'll come with you."

I had told everybody to stay away from the airlock because I was afraid someone would do something wild like trying to open it to see if Jim was coming. Some people can never comprehend a vacuum — they know they can't stick their heads out in space because they've been told, but they never see why. They have some vague idea that if they held their breath it would be quite safe.

No one needed to be at the airlock, anyway, because if Jim could reach it he could certainly operate the doors. But inevitably, very soon after Stowe and I went there, we were all crowded in the cramped spaces at the stern of the ship. It was cold there. That was where the air circulation was strongest, and where most of the cooling of the air was done. I realized that it had been quite cool for days. The hull must be absorbing less heat from the sun, allowing more to radiate away, and gradually the temperature was dropping again.

Morgan and Betty were with us again. Morgan was silent and withdrawn. Betty was shivering. There was something pathetic about Betty; it was partly her youth, partly her helplessness, partly her slowness. She had made herself a bra long since, not to be different from the others by going on wearing her sweater. Clad as she was, her small body was thin and fragile. Her ribs showed plainly, her legs were too thin and her shoulder-blades stood out sharply in her back. She wasn't unattractive, but beside

Leslie, who was as slender as a beautiful girl could be and still be called beautiful without reservations, Betty was thin and bony.

I didn't see how Morgan could possibly hit her. It was like hitting little Bessie. Leslie was different. There could be physical rivalry with a girl like Leslie.

God, it was time Jim was back.

I knew that if I had to go through the whole thing again I wouldn't let Jim go. I searched desperately for something to say, anything that wasn't about Jim.

"I think we could put a couple of the panels back, Sammy," I said. "There and there. The radiation isn't so —"

The wheel that closed the outer door began to turn. Stowe jumped to spin it. I grabbed his arm.

"Let Jim do it himself," I said thankfully. "He may have a leg in the doorway or something."

When we saw that the outer door was tight shut, however, I threw back the inner lock. Air whistled past us and filled the empty lock.

There's not much that can change faster than human beings' moods. It only took us about half a second to transfer our concern from Jim back to the fuel question. We saw through the faceplate that he was all right; instantly all of us except Stowe forgot our anxiety and began to babble excitedly about what he might have found, while Sammy and I started to unscrew the nuts that secured his helmet.

"He's back — it must be all right," said Betty, with baffling logic.

"I knew he'd do it," said Stowe, wildly distorting the truth in his belief.

"Maybe we'll have our nineteen children after all," Leslie told me, grinning.

"But if there *is* fuel, how are we going to get it here?" asked Harry, seeing that problem for the first time.

"Easy," I said. "It doesn't weigh anything, and in space it hangs together by surface tension. All we have to do is —"

"Get on with your job, Easson," grunted Sammy, "and don't count your chickens before you've got any eggs."

We got the helmet off and looked expectantly at Jim.

"I'm sorry, Lieutenant Bill," he said. "There's nothing in that ship — no air, no fuel, no people, no anything. It's empty!"

We stared at him, the excitement and expectancy slowly disappearing from our faces. It had always been a wild hope, but we had let ourselves believe in it. When I saw Jim back, I too had allowed myself to think, for no reason at all, that he must have been successful.

I forced myself to say calmly: "Oh, well, we'll have to do the best we

can." Jim was almost in tears, as if it was his fault — no wonder, with everyone looking at him in silence, all hope and pleasure in his return wiped off their faces and nothing left but blankness and despair. Somehow we had worked out, like Betty, that if only Jim came back safely, there would be nothing to worry about. "Cheer up, Jim. You did very well. You couldn't find fuel if there wasn't any there."

Betty, more from strain than anything else, burst into tears and threw herself in Morgan's arms.

"I always saw myself as a tragic hero," said Sammy, not very helpfully. But he made amends by ruffling Jim's hair and telling him, "Bill's right, second lieutenant. It's not your fault the tanks were empty."

Jim, whose sense of humor wasn't as adult as most other things about him, chuckled involuntarily. And if we still felt despair at Jim's report, at least we didn't force it on everyone else. We came to life again, smiled and talked and pretended the whole incident was merely a welcome break in the monotony of our existence.

But it was our lowest point on the trip so far, worse than when Mary died, worse than when we knew Earth was burning. You never know how black things can look until your hopes have been raised and then dashed again.

VIII

I left Jim with his father and the others for a few minutes, to let them all realize that he was safe and had done his job well, even if it hadn't been successful. Then I set Stowe, Harry and Morgan on the job of refitting two of the neutralex panels and took Jim, Leslie and Sammy into the control room.

Jim couldn't understand what had happened to the other ship, and neither could I. He had noticed long before he came to it that there were no lights in the control room, but that wasn't surprising. When we were all in the lounge there were no lights in our control room either.

The first shock was when he found the outer airlock doors open. He closed them and opened the inner door. There was no rush of air. Everything was black. He had to shine his torch to find the lights. They went on at once.

The ship was almost as empty as if there had never been people in it. Not quite; he found a handkerchief and a girl's stocking. The log wasn't opened — there wasn't a line in it.

The plants in the trays were dead; the water-purifier seemed to be working. Nothing was broken except one of the meters in the control room.

The fuel register was at zero. There was no space suit on the ship.

"I wondered," said the boy tentatively, "if they hadn't already transferred to another ship. With two suits, theirs and the one in the other ship, they might have ferried people across one at a time . . .?"

"It's the only reasonable explanation, Jim," I said, "but I'd like a better one."

Where was the other ship? Why had they left the ship that was on a perfect course for Mars, when they could have transferred fuel from the other?

"How about supplies?" I asked.

"They hadn't been touched," said Jim. "Vitamin tablets, concentrates, synthetic protein . . . I left them because we have enough, haven't we?"

"Quite right, Jim." But that made it even more incomprehensible. If they had transferred to another lifeship, they would need their own supplies.

"Could they have been picked up by a regular ship?" Leslie asked.

"It's possible. That would explain a lot. But the regular ships would be packed with all the people they could carry."

We had to leave it at that. Every one of those 700,000 ships had a story, some merry, some tragic. And we had hit on one of the mysteries. What seemed to me most likely, after considering the possibilities, was that one of the regular spaceships had had to take off in a hurry, half-empty. Perhaps, in the center of a riot after the lifeships had gone and the people of the world were one crazed mob left behind to die, a spaceship had had to blast off in a hurry or not at all. Naturally enough, if that was so, it would match velocities with lifeship after lifeship, taking off people who otherwise had a much smaller chance of reaching Mars safely.

And if so, we had been just one ship too late. With the one Jim had examined the regular ship had reached its limit and blasted on toward Mars. It would probably be there now, safe. It's difficult to imagine the difference between the regular ships and the lifeships if you don't know it. The regular ships could take three hours, if they liked, to reach 1000 miles up from Earth; they could maneuver in space better than an airplane in an atmosphere; they even, some of them, had artificial gravity of one sort or another — magnetic or centrifugal, mostly — so that people could go from Earth to Mars as comfortably as from New York to London. Only it had never been necessary to transport more than a few hundred people a year between the planets.

Sammy, of course, realized that this was what had probably happened and that we had just missed rescue. "Our usual luck," he said morosely.

"I checked that all the fuel was really gone," said Jim. "I climbed into the

firing chambers. The blast had never been cut at all. It was just left till all the fuel was gone."

"Well done, Jim," I said. "I can't think of any more you could have done."

"There *was* something else," he said hesitantly, not wishing to appear to be boasting. "I was a long time in space both ways, and I spent most of the time looking for other ships. The sky is full of pinpricks of light, and it's difficult to pick out anything for sure. But I saw that both our ship and the other lifeship had a bluish tinge. I looked for any other spot of light with that blue tinge about them . . . there weren't any I could be really sure about."

He looked at Sammy a little nervously, perhaps expecting him to explode in bitter fulminations against somebody or Fate. He gulped, aware of his responsibility in positively denying something that none of us could check, or affirming something that might be wrong.

"There was one little speck that might be a lifeship," he said at last. "I could hardly be sure it was there. Away toward Saturn."

"Could you get to it, Jim?" I asked.

"I might. But . . . I don't think I could get back. If this ship behind us is six miles away — and I think it's probably quite a lot more than that — the other ship must be at least a hundred miles away." He added, apologetically again, "I'm not really sure it's there at all."

Then contacting other lifeships was out of the question. I could use our fuel to get nearer the second ship Jim mentioned, but it was too big a risk, and not worth it.

"We may as well forget other lifeships," I said. "It was a chance, that's all. Never mind, Jim. It was worth it anyway."

IX

The days slipped past. Sammy really had very little to complain about. I could think of a lot of unpleasant things that might have happened to us that didn't, and a lot of respects in which we were fortunate.

The course was one thing. I wasn't responsible for that. The men at Detroit who had set up the ship and trimmed the jets had done a magnificent job. Every new calculation I made showed more clearly that we were going to hit Mars fairly and squarely, without a single blast for course correction. That isn't precisely what you'd expect. The wildest optimist would hesitate about suggesting that you could set up a ship on the surface of Earth so accurately that mere blasting free into space would send it directly to Mars — or where Mars would be when it got there.

If we did get through, if we did land safely, the real credit would go to the men who had trimmed the ship. Even if we didn't, it was already clear that they had done all they could for us. And if we didn't get through, who would? Certainly not the ships that had had to correct their course just clear of Earth's gravitational pull, again on the way, and a third time as they neared Mars.

I haven't mentioned the things that went off pretty much as expected. The air inevitably became a little stale; we couldn't wash it out thoroughly. There were gripes about that. Food from a hydroponics plant is all very well, but there was a sameness about it that made some of us want to scream. Potatoes, water, synthetic protein, vitamin tablets, tomatoes, sugar, lemon juice, carotene and all the rest of it — eating on the lifeship wasn't interesting or enjoyable, and we all felt permanently unsatisfied and dreamed of steaks and fried chicken. But all the same, food was never a problem. There were no signs of malnutrition. All the hydroponics plant and our meager supplies were meant to do was keep us alive and reasonably healthy, and they did that perfectly efficiently.

Some of us missed tobacco. I didn't — I had been a smoker, but I saw so clearly before the trip started that living was more important than smoking that I hardly thought of it after that. Not smoking was part of life on the lifeship, like the weightlessness.

Exercise wasn't missed as much as we'd have thought. You don't need as much exercise when you can relax utterly, and we all learned that. We became capable of floating so limply in the air that a mere hint of a draft would roll us over, bend our limbs, wag our heads. Relaxation like that just isn't possible when gravity is present.

For the exercise that was necessary we instituted a sort of sports day that was held regularly. The purpose wasn't competition, it was primarily to use muscles that otherwise wouldn't be used at all. The sports became more complicated as we adapted ourselves to the conditions.

There was four-five-bump, for example. You had to start out from one wall, touching five walls with left hand, right hand, left foot, right foot and head, and bumping on the last with what Harry Phillips called your Sunday face. The whole thing was timed, and the winner was the person who could do it most quickly. The usual winner was Bessie, presumably because she was the most adaptable among us. None of the rest of us could get the trick of doing the whole thing as a concerted action the way she did.

There was the arm race, a race across the lounge without a pushoff, using only the arms to propel you through the air. Again strength didn't count. It was Miss Wallace who made the best use of arms and air resistance, pulling herself rapidly along with slow, strong strokes.

There was wrestling, in which a fall was a touch against any wall. Sammy and I would wrestle, then Leslie and Miss Wallace, Betty and Jim, and so on until we all ganged up on Bessie, to her delight.

I think generally we must have been one of the happiest lifeship crews among the 700,000. And it made me proud, for I felt I had chosen well. Only after Morgan Smith's name was there any sort of question mark.

As we were nearing Mars Stowe married Miss Wallace. The rest of us were faintly surprised, but realized when we thought about it that it was a good thing. Stowe was a little defiant, in case anyone suspected he had forgotten Mary, or that she hadn't meant much to him. But I think we all knew better. After all, it was a long time since Mary died.

Miss Wallace was really rather young for Stowe, but she didn't look it. We had always called her Miss Wallace; now, when she became Mrs. Stowe, we began to call her Caroline. It was only then that we learned her first name.

Her marriage was no more formal than those of Betty and Morgan, Leslie and me. But one automatically made the change and thought of her as Mrs. Stowe. That wasn't the case with the rest of us. Betty was just Betty, and I had never thought of Leslie as Mrs. Easson. If this casual marriage became common, I could see the custom of the woman taking the man's name dying out altogether. Miss Wallace wanted to be Mrs. Stowe, but Betty preferred to remain Betty Glessor, and Leslie, when she once signed her name in the log, signed it "Leslie Darby."

"Now I'm left all alone," said Sammy. "Will you marry me, Bessie?"

"Yes," said the child instantly, "if you'll stop looking so black."

X

Mars was big in the forward window now. The first of the three big questions was already settled.

The three questions were: Would the ship miss Mars? Would it take up an orbit round it? Would it crash plumb into it? I wanted them settled, if possible, before I did anything at all.

It was clear that the ship wasn't going to miss Mars. I had been spending hours in the control room looking at it and wishing I was a better pilot.

Spaceships at best — I mean the regular spaceships — can't afford extra people on board. The crew is always at a minimum. That means that in emergencies everyone must be able to do someone else's job. As well as being a radio officer I had been fourth pilot. I had taken up and landed ships — big ships, ships they trusted me not to smash. But always I had an experienced pilot at my side, ready to take over. Always I'd had painstaking,

quadruple-checked calculations on which I could and did trust the ship and my life and everybody else's life. Always, most important of all, I'd had plenty of fuel in reserve, so that if I was at all doubtful I could blast clear and try again.

In those circumstances I wasn't a bad pilot. I had been passed without hesitation — indeed, with the utmost confidence — as a lifeship pilot, and the question of further training and practice didn't arise. After all, 700,000 pilots had to be found. If any had to be trained specially for the job, it certainly wasn't the few men who had actually flown a regular ship, ever.

But I knew that Mart Browne or Colin Mitchell, say, two of the pilots I'd worked with, would merely glance at the controls of the lifeship and at Mars and know exactly what they could do and what they couldn't. By feel they could put the ship in an orbit, with the fuel I had, if that seemed the best thing to do. And either of them, I felt, could have a healthy stab at the job of setting the ship down — again, on the fuel I had.

Some lifeships would be lucky that way. They would have trained, experienced pilots, and men like that, given half a chance, would do the almost impossible. Others, perhaps, would be lucky in having someone in charge who didn't know the difficulties, someone who would come through without having any idea of the various disasters he'd just missed.

I had the little learning that was a dangerous thing. I knew what could be done, and I *didn't* know which of those things I could do and which I couldn't.

The effect of Mars's gravity wasn't really being felt yet. When it was, the ship would swing into position to blast against it.

"I don't see any ships coming out to help us," said Sammy, as we looked at the world which was to be our home or our grave.

"Write that off, Sammy," I said. "Take us as being the average ship. The average lifeship won't get any help — only the lucky ones."

"I thought we were supposed to be one of the lucky ones," said Sammy, with a grin. Sammy was like that — if others were optimistic, he was gloomy; if others were gloomy, he was cheerful.

"So we are lucky. Here we are, heading straight for Mars, taken all the way by three minutes' blast from Earth. That's luck. Nobody could count on it. But on the other hand, it's not by any means fantastic or incredible, considering that's precisely what they were planning for every lifeship, back on Earth, for months. I mean, if you aim for a clay pipe at a fairground and ring a gold watch, that's blind luck. But if you aim carefully for the gold watch, and get it, that's —"

"I get your point. So we're not going to get any help?"

"Doesn't look like it. And it doesn't look at all likely that we're going to

orbit, either. The course was *too* good. If we were going to miss Mars we might be captured by it — but we're not."

"That leaves us to try for orbit or landing. Which is it going to be?"

"Landing," I said promptly.

Sammy raised his eyebrows. "Isn't the other the better chance?"

"Yes. But if we fail to orbit, we lose the chance to try to land soft. If we try to land . . . well, we certainly land. Depends how hard, that's all."

I had thought there would be all sorts of last-minute things to do, things to clear up. But I found myself suddenly, without warning, talking to everyone in the lounge and telling them the trip was over bar the question of success or failure.

"I never told you why I slammed on the acceleration when we were coming unstuck," I said, and there was sudden attention that I hadn't quite had until then. When I began to speak, they probably thought it was just Bill talking to them, not Lieutenant Easson. "I saw we weren't going to have enough fuel, and I tried to save some. You knew when Jim went to that other ship that he was looking for fuel, but I didn't say then that under no circumstances could the fuel I had land us safely on Mars."

"We guessed that, son," said Harry. "Bad news travels fast. I think we all knew. But thanks all the same. It was a nice thought."

I looked round them. Yes, nobody seemed surprised. Betty was clutching Morgan tightly, as though, if they were close enough together, nothing could harm them. Leslie was playing with Bessie, and though I knew she was listening intently to what was going on, she showed no sign of it. Stowe nodded slowly, and clasped Caroline's hand. Jim couldn't help looking rather disappointed that everyone knew what he had been carefully guarding as a secret.

"Well, that saves a lot of trouble," I said briskly. "All right, get strapped up now and into your couches and be patient. I'm going to wait until I think the time's right, and then blast with all we've got in the way that gives us the best chance."

I looked round them intently. "It'll be cruel," I warned them. "Far worse than when we left Earth. You'll feel the floor's trying to push its way right through you. Don't think you have to bear it silently. Scream all you like — it'll help."

"How many Gs will it be, Lieutenant Bill?" asked Jim, interested.

"I don't know, Jim. I'll tell you this — it'll be more than the human frame is supposed to be able to stand. But that's something that's been put up time and again. Let's see if we can put it up once more. People who traveled at twelve miles an hour didn't have their heads blown off, remember."

"Will the linings stand it?" Jim asked.

I made a face at him. "Think about that after we land, Jim," I told him. "Just at the moment, please keep that and any other interesting questions to yourself."

"How long have we got?" asked Sammy.

"Plenty of time, I suppose, but better start strapping each other up now. There may not be as much time as I think."

Imprex was developed primarily for this job. It's a binding tape that sticks only to itself, easily torn off when there's no strain, and stronger and stronger as the strain is put on it. It's elastic and equalizes the strain against it throughout its length. For support against acceleration or deceleration, it's better than anything else.

I waited in the control room while Leslie helped the others, then came back to strap her up myself. That was the only time on the trip that Leslie got special consideration from me. I wanted to be sure that she was as well prepared to stand the deceleration as she could be.

She wanted to be with me in the control-room, but we couldn't shift her couch in there. I taped her very carefully, probing delicately at the imprex and taking it off again if it was a fraction too tight or too loose.

"None of the others are done as carefully as this," Leslie whispered. "Shouldn't I . . . ?"

"It won't make all that difference," I said. "But while I've got a certain responsibility to you all, I feel I have a special responsibility for my wife."

XI

Now I couldn't see Mars any more. It was beneath our jets as the ship dropped. I was letting it drop.

Mars had an air pressure of between six and seven pounds — quite enough for life on a world that called for little effort. Since there wasn't any air until much nearer the surface, my altimeter was useless. I didn't know, couldn't know exactly where we were in relation to Mars. My calculations were based on a constant speed, and checked by Phobos and Diemos, which I could see.

I had known all along that it was liable to be like this — blasting for a short time, too little, too late. There had been no dramatic last minute rescue. None of us had been able to construct a superdrive out of the sole of a shoe and a couple of hairpins. We didn't, unfortunately, carry an amateur Einstein who was able to work out on the back of an envelope a way of landing safely without using any fuel at all.

Far from all this, what it came to in the end was that I sat with my hand poised over the firing-button, waiting till it felt right to close it.

I've known men who trusted their lives to their instinct for the right moment. They did it because they had found it paid off. I only did it because I had to.

Now, I thought, and closed the switch. There was no sound. There was nothing outside for the blast to thunder against.

But I didn't miss sound in the welter of tortured vision, crushing gravity, drumming in my brain and shooting pains. It was much worse than I had expected, worse than I had been able to imagine. My teeth ached, there was a fire in my belly, someone seemed to be tearing my skin off with pincers. There were sensations which I couldn't explain afterwards.

It was a thousand tortures all at once. I remembered reading that some worlds were so dense that a steel bar would flow like liquid. I felt like the steel bar. I felt as if I was on the point of collapsing into the constituent elements of my body, but something was stubbornly holding me together to suffer more.

I never thought of the others below suffering the same thing. There comes a point when nothing exists but one's own pain — it shuts out the rest of the universe.

I clung at first to the idea that this couldn't last long. Soon, however, I had to give that up. To the creature I had been before I started the blast, a few seconds were a mere breath of existence. But now, every second was an eternity of agony.

Then, I was actually praying for the last dregs of fuel to be used up. The deceleration would stop and my ordeal would be ended.

But I couldn't take my eyes from the dials. Watching them every millimeter of the way, I split their remaining traverse into imaginary divisions and told myself as they crept over: *Now there's only a quarter to go. An eighth. A sixteenth. A thirty-second. . . .*

And then there was no more to go.

Vaguely I tried to prepare myself for what I knew was upon me — the awful moment of helplessness when the drive stopped and the ship went on and on and *down*.

The needles touched the mark and I was almost thankful. My pain had very nearly conquered my will to survive. Now, we'd crash . . . and my agony would end.

But it did not end.

The instruments said the fuel was finished — and the blast went on!

I forced myself to search the dials again, thinking that, under the strain, I had probably miscalculated. There wasn't a simple 30-20-10-0 type of gauge; you had to balance two or three factors to figure the actual quantity of fuel left. I calculated these again, slowly, laboriously. I was still right.

There was *no* fuel.

But the drive still blasted.

For a moment it was all meaningless. My brain was so busy recording unbearable pain that it just couldn't evaluate this new, incredible situation. Finally, I managed understanding.

There was a safety margin.

There might be — just *might* be enough fuel to make it. In one blinding instant I experienced every emotion I had ever felt in my entire life. There was wild hope that we were going to be safe after all. There was fury that we had been tricked, that all my calculations had been ruined by this revelation that there had been something in reserve. There was an apathetic desire that we would crash and die and it would all be over. There was misery, self-pity, regret, disgust, fear.

Everything that was in me was being squeezed out. I was an organ on which every stop was out, every note sounding together in shattering cacophony. I realized that if I lived through this any horror that ever happened to me subsequently would be a pale ghost beside it — but that thought was swept away by the passionate conviction that no one, nothing, could live through this. I was dead, we were all dead, squirming in our last agony like crushed insects.

And then, unexpectedly, came a blessed release. The torture went on, but it suddenly seemed unimportant. I could think again. I could wonder whether the extra fuel was a mere accident, the result of faulty equipment on the lifeship, or if it was a deliberately concealed reserve which every lifeship had, a safety margin to turn the impossible into the just barely possible. I could think of Leslie and hope fervently that what had happened to Mary Stowe hadn't happened to her. I could marvel that our rocket linings had stood the strain. I could think gleefully of what I might, after all, be able to say to Sammy about whether we had been lucky or not.

And just as I realized that the thousand-to-one chance had swelled and swelled until it threatened to explode, we crashed. I had time to appreciate no more than the fact that we were down, when I bounced out of the couch as if I'd fallen on it from a great height, and smashed the dials in front of me with my face.

XII

When I became conscious again, two things registered at once, jamming each other. There was gravity — I couldn't see. For a second or two they fought with each other, then a feeling of peace and relief flowed over me.

Even before I knew I wasn't blind, I realized that I'd much rather be

alive and blind than not alive at all. So it was with real pleasure that I found that even through closed eyelids and bandages I could see light. It must be bright. This was Mars, lit by the new, brighter sun.

I moved, and though I was sore all over it was quite a pleasant soreness — like rest after long, back-breaking labor. My arms, my legs, my head, everything moved. I was in bed, and the sheets were cool.

"Leslie," I said. I don't know how I knew she was there, but I did. I drew my arms clear of the sheets, ignoring the stiffness, reached out — and Leslie was in them.

"Bill," she whispered. I sensed her bending over me, and her lips brushed mine lightly. I felt her anxiously. She had an arm in a sling, but as far as her knees I couldn't feel anything else wrong.

"No, I'm all right," she said. "So are you, except for perhaps a scar or two that'll make you look distinguished."

For long seconds we just held each other. But then I had to ask:

"How many of us are safe?"

She laughed breathlessly. "All," she said. "Every one. Sammy, Harry, Bessie, Morgan, Betty, the Stowes. And you and me. The lifeship didn't come through too well, but. . . ."

"The other ships?" I demanded. "How many of them are getting through?"

"Hundreds," she said lightly. "They're dropping all over Mars. Most of them are dropping too hard, though. Don't think of that now, Bill. We don't know the picture yet. We don't know how many lifeships are going to land safely, but you were right enough — it can only be one out of quite a lot."

She laughed again, and I felt her lay her cheek against my bandaged face. "Still, with you piloting the ship, how could we help but be the one?"

Epitaph Near Moonport

He got off in mid-passage, did Sandy MacPhee.

He'd be damned if he'd pay for a fall that was free.

For some twenty years now, J. B. Priestley has been more seriously concerned with the problems and paradoxes of Time than any other writer not a specialist in science fiction. J. W. Dunne's AN EXPERIMENT WITH TIME and the Moberly-Jourdain AN ADVENTURE profoundly affected Priestley's thinking about the nature of our life; and the brilliant DANGEROUS CORNER, at once the best if-speculation and one of the best murder melodramas of the modern English stage, was followed by TIME AND THE CONWAYS, I HAVE BEEN HERE BEFORE and other theatrical studies in the field of Time. We don't recall, however, that Priestley has ever before developed this Leitmotif (or Zeitmotif) into a short story, as in this poignant and evocative picture of Edwardian England and of a young man of today who, like Moberly and Jourdain in the gardens of Versailles, suddenly and unaccountably stumbled through a fault in the time-structure of Things As They Are.

The Strange Girl

by J. B. PRIESTLEY

THERE WAS a glassed-in passage that ran from the far end of the smoking room to the big conservatory; it was probably a favorite sitting-out place at dances, and the basket chairs might have been left over there from some recent dance. Mark chose a chair that was nearer to the smoking room than it was to the conservatory, so that he could still see the group around the piano. He could hear behind the singing and the piano the steady chug-chug-chug, from somewhere not far away, of the primitive electric-light plant that Lord Boxwood had been boasting about at dinner. The voltage must be low, Mark thought, and the bulbs could not be any more than fifteen-watt; they did not give much light, but had an attractive golden glow.

In the smoking room, however, not far from the piano, there were also two large oil lamps. It was this lighting, mellow and a trifle theatrical, Mark concluded, that gave the suggestion of unreality to the scene.

He was smoking a very fat Egyptian cigarette and not enjoying it, but then there had been no sign of any Virginia cigarettes anywhere and he had not felt like tackling the cigars he had been offered after dinner. He was still

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feeling some bodily discomfort. It was some years since he had last worn white tie and tails, and these evening clothes were not his. The collar was appallingly high; no wonder some of the older men looked apoplectic.

All the younger men and the girls were clustered around the piano, played with energy and not without skill by the monocled Captain Waterhouse. Now they were beginning in chorus "Tell Me, Pretty Maiden," from *Floradora*, which Mark had heard on an old gramophone record.

The men, beefy and bold, roared their lines, and the girls came in with the responses, giggling a little and sounding very innocent with their wavering soprano.

With their hair piled so high, with such generous offerings of pink arms, white shoulders, plump, soft bosoms, these girls seemed both larger and sillier than any girls he had known before. They made him understand all those winking references to "girls" and "curly-curly" in the old popular songs. He was now looking at the prettiest of all earth's extinct creatures. The men were singing their invitation to take a little walk, and they were having some difficulty with the modulations of the tune, but coming out loud and rich with masculine vigor. They made him feel about a thousand years old.

He dug the heels of his dress pumps, which did not fit him too well, deep into the coconut matting. At first, just after it had happened, he had merely felt bewildered. Then for the next two or three hours, before and during dinner, he had felt frightened — of the fantastic situation he was in and of the social complications it might produce, the embarrassing questions. (Thank Heaven he had landed among this casual, moneyed class, still so certain of themselves!)

But now — and it was this and not fear that had driven him out of the smoking room — he was possessed by a sense of loneliness that was becoming a feeling of utter desolation. The professional social historian in him was completely defeated; and even if he had had a notebook, he could not have made a single note. All he could observe was that distance in time was apparently harder to bear than distance in space. Here he was, not 200 feet away from his study and bedroom, but back in his own time he would have felt less desolate, he was certain, if he had suddenly found himself wandering on South Cape, Tasmania, half the globe away from home. Was home, then, more in time than in space? Yesterday he would have said no, but now he was not sure. Odd how the young, high spirits of the group around the piano, the sight of their flushed faces, the laughter breaking through the straggling chorus, widened and deepened his desolation.

But here was company — further need for care. For the elderly lady, plump and mottled, who had sat opposite him at dinner, came waddling in

from the smoking room and sank with relief into the chair next to his. "I don't think we were introduced," she began. "They're always so casual here, especially when the youngsters have filled up the house. I'm Mrs. Buller — Lord Broxwood's sister — and, let me see, you're Ronald's friend, aren't you?"

This was rather tricky. "Well, yes — in a way," he admitted.

"I'm abominably curious. My family is always teasing me about it, so you mustn't mind. But wasn't there something about a bathing accident, Mr. — er —?"

"Denbow. Mark Denbow." What would she think, how would she behave, if he told her he had finished taking his evening seminar (yes, here in this house) at 7 o'clock, had then hurried across to the lake for a quick dip before supper, and had dived — into all this? He gave her what he hoped was a friendly but apologetic smile. "Yes, I was bathing in the lake and somehow lost consciousness — probably hit something when I dived in. And then your nephew, Ronald, fished me out."

"How fortunate!" Although she was so plump and smiling and comfortable, her eyes, with no more color in them than a February sea, were cold. "One of his Oxford friends, I imagine, Mr. Denbow."

"I was at Oxford," Mark said, "but not with Ronald. As a matter of fact, we hadn't met before." One glance at her told him he could not leave it there. "I happened to be staying in this neighborhood and — er — thought I'd bathe in the lake. And after I'd got into difficulties and Ronald pulled me out," he continued, gaining confidence, "I was rather exhausted, and he very kindly insisted on my spending the night here."

"That's so like Ronald," she said, smiling. "So brilliant, too. Even when he was a little boy he was quite clever. We all feel he has a great future."

And now what would happen if he gave Mrs. Buller a hard look, tapped her on her broad, silken knee, and told her Ronald's future? For the memorial tablet in the family chapel declared that Ronald had been (or would be) killed at Neuve-Chapelle in 1915. But while he was making some vague reply, Mrs. Buller found another topic.

"It's rather odd," she began, "but my niece Muriel followed her brother's example. So there are two of you."

"Two of us?" This really startled him.

"Oh, I don't mean this girl was bathing too. You probably haven't seen her, because she didn't come down to dinner, not having anything decent to wear — mislaid her luggage, apparently. Ann something; I didn't catch her name. Indeed, I only caught a quick glimpse of the girl herself, a curious little creature. I gathered she'd been abroad — France, I believe — and arrived here, thinking it was some other house. And she'd walked from the

station and been out in that dreadful thunderstorm, so Muriel, who's always sweet and kind, wouldn't let her go."

"Was there a thunderstorm?" asked Mark innocently.

Mrs. Buller stared at him. "Where can you have been? The one that started just before 6 o'clock."

"Oh, yes, of course," he cried. "How stupid of me! I ought to have remembered." But what he ought to have remembered was that Mrs. Buller's weather, before 7:15 tonight, was not weather.

"Ah, here's Dorothy, my daughter," Mrs. Buller cried, with maternal satisfaction. "Well, darling, are you tired of making noise in there?"

Dorothy was a large, pretty girl in pink. She perched on the creaking arm of her mother's chair. "It's so jolly hot in there, Mummie," she said, smiling vaguely at Mark. "And I'm hoarse trying to sing. I hope they'll stop soon — and dance or something."

During the next few minutes, while the three of them talked, Mark kept looking at Dorothy's eyes. They were bluer and finer than her mother's, but what fascinated Mark was that they had a peculiar slant, and he remembered having noticed similar eyes in some elderly woman quite recently. Nothing changes less about us, he knew, than the characteristic shape of our eyes. And now he remembered whose eyes were like these: they belonged to a member of the family here, old Lady Purzley. Were pink, smiling Dorothy and that grim old survivor, Lady Purzley, who had questioned him so ruthlessly about the school, the same person? He decided, feeling the hair on his head stand up, that they were.

Mrs. Buller thought she would try the cardroom and gave Dorothy permission to show Mark the conservatory. It was almost as big as a public park and full of the rich tropical smell that arises from so much growth, yet seems to have more death in it than life. He had never seen the conservatory before; it must have been taken down or allowed to fall into decay just before or during World War II.

Among that cascading greenery and the smell of warm, damp earth, in the dim undersea light of the place, Dorothy looked like some giant pink blossom. Yet somewhere along time's winding course, just before it dipped into darkness, she would be Lady Purzley, gnarled, tweedy, staring at him mistrustfully, opening thin and bitter lips to put insulting questions to him before taking a not-too-unfriendly farewell of him and all the works of his kind. What was it she had said? "I suppose there's some point in all this adult education we're compelled to pay for, although the results are not very obvious. But I remember this house when it was full of young and hopeful life, brave young men who had manners, pretty girls who had charm."

And hearing Dorothy chattering on, he could now discover the likeness in

the two voices. In his desolation he felt the need of some physical contact in this other time into which he had been thrust. So he put a hand under Dorothy's round elbow, presumably to guide her, then let it slide along her forearm until their hands met, and, perhaps because she intuitively perceived his need, their fingers intertwined. He laughed, although he had no idea why he should.

"Why are you laughing?" she asked.

"I really couldn't tell you. Do you know anybody called Purzley?"

"Yes, I know a young man called Purzley — Geoffrey Purzley. He rather likes me, but I don't like him much. Do you know him?"

"No," Mark said, smiling. "I hardly know anybody. Except you."

"You don't really know me," she told him, with the sudden solemnity of girlhood. They had stopped and were half facing each other, in what might have been a jungle path.

He laughed again, and this time not without amusement. "In a way I know you better than you know yourself." He hesitated, wondering if he was making a fool of himself. "I can tell your fortune."

"Can you?" She was all credulity and eagerness. "How do you do it?"

"Just by looking at you. Want me to try?"

"Yes, of course. Go on, please."

After a longish stare, which he tried to make rather sinister, he said, "You'll marry Purzley, who'll do something important and be given a title. You'll have three or four children, who will also do well. You'll live to a ripe old age and become a most formidable old lady, striding around in old tweeds and thick shoes."

She gave an uncertain little laugh. "That's absurd. You don't know really, do you?"

He nodded. "In your case — yes, I do."

"Well, you might. Do you remember when we were all in the drawing room, after dinner, and you talked for a minute or two to my cousin Maud and me? Well, when you left us, Maud and I were talking about you. Shall I tell you what we said? You might be flattered or you might be furious — I don't know. But I'll risk it. Well, we agreed that there was something frightening about you. Maud said it was your eyes. I said I thought it was your manner."

"Rude?"

"No, not really, though some people might think so. Odd. Abrupt. As if you weren't English — and you are, aren't you?"

"Miss Buller, I'm very, very English," he told her, with mock gravity.

"Now you're making fun of me. Shall we go back and see what the others are doing?"

"Yes, this time. But I warn you, it can be dangerous."

"I don't understand. What can be dangerous?"

"Going back and seeing what the others are doing." And as he followed her, at a sauntering pace, he began trying to work it out. Here, floating beside him, all pink and downy, was young Dorothy Buller, who in 50 years would be the old Lady Purzley who came to see what he and the others were up to in this house. Now if, when he got back (and he still refused to believe he wouldn't), he asked Lady Purzley if she remembered having her fortune told in this conservatory, when she was a girl, what would she reply?

But wait a minute. He, Mark Denbow, couldn't possibly be part of Lady Purzley's youth, because he wasn't born then. Yet here he was with Dorothy, who undoubtedly *was* Lady Purzley round about the age of twenty. And then, trying to work it out, he was off again, just as he had been before dinner when Ronald Farspeare had left him to dress and he had begun losing himself in a maze of time-orders and dimensions. Whether or not he was existing in a time quite different from that of ordinary world history, was moving in some unknown dimension where all possibilities might be realized, one somber fact remained: that outside the immediate sense of bewilderment, like a vast, dark space empty of stars, was a feeling of utter desolation, ultimate heartbreak.

The group around the piano was dispersing, but the energetic Captain Waterhouse, with the monocle still screwed into his fiery countenance, had not deserted his instrument. He began playing waltzes, dreamily at first and then, in response to several cries of encouragement, with the rhythmical emphasis of a dance pianist. Dorothy melted into the arms of a bulky young man called Archie, and was whirled away. All the ripe, soft girls were soon twirling in the arms of their hearty, self-assured young men. Mark loitered near the piano, seeing it all as a tiny, lighted dream against the immeasurable dark.

"Now don't tell me you can't waltz," cried Maud, the middle one of the three daughters of the house. She had arrived with a footman who brought a tray of drinks. She held up her arms invitingly; and after hesitating a moment — it was some time since he had done any waltzing — Mark took hold of her and off they went. She was a dark, high-colored girl, blazing with some mysterious inner excitement, passionate love or secret dreams of glory. All Mark knew about her, from the memorial in the family chapel, was that she had died — or would die — in 1923, after a long illness, bravely borne, following her nursing service in Serbia. And it was not easy to dance well with a glowing creature who would soon be a long illness bravely borne and then three lines in marble on a chapel wall.

"I believe you hate dancing," she told him.

"Am I so bad?" He had to make an effort to find the right tone.

"Oh, no, not at all, rather good in fact. You keep good time, which most of the others don't. It's just the look on your face, in your eyes."

"I've heard about my eyes already — from Dorothy Buller." And he smiled into the fiery darkness of Maud's eyes.

"Now that was jolly unfair of Dorothy," Maud cried. "I ought to have warned her; she always tells everything. But there *is* something odd and disturbing about your eyes, Mr. Denbow. Ronald never explained properly; he never does. Were you nearly drowned?"

"I'm not sure," he replied carefully. "Perhaps I was."

"That would explain it if you were," she said gravely. "As if you'd seen something we hadn't seen."

"Oh — I have — I have — I have —" He whirled her round and round, faster and faster. "Lots — and lots — and lots — of things — that I couldn't — begin — to tell — you about —"

"Oh!" she cried, out of breath, "I — love this — don't you?"

Captain Waterhouse left the piano, having decided that he needed a drink. The dancers waited uncertainly for the music to begin again. It was then Mark noticed the girl standing near the door. She was an odd figure, and he knew at once that she had not been at the dinner table and that this was probably her first appearance downstairs this evening. She looked thin and ill, her dress hung badly, and there appeared to be something wrong with her hair.

"That girl over there," Mark said, "is she the one Mrs. Buller mentioned to me — Ann something — who came to the wrong house?"

"I suppose so," Maud said. "Poor darling, she does look peculiar, doesn't she? It's all rather confusing. My sister Muriel knows all about it, I don't. She's English, but she's just come from France. She thought she'd been invited to stay here by some people she'd met in Paris. We think it must have been the Ferrers over at Winbone Manor; they're always going to Paris. I believe Muriel has sent a message to them about her. Came to the wrong house, mislaid her luggage, was half drowned in the thunderstorm, poor girl! She wouldn't come down to dinner, had a tray upstairs, but I suppose she found it too boring up there. Though I think in her place I'd have stayed upstairs. She does look all lost and strayed, doesn't she? I wish you'd go and ask her if she'd like something to drink. And generally look after her, will you?"

"As the other lost and strayed type," Mark said, "it's the least I can do."

"That's another thing Dorothy and I noticed," Maud said, smiling over her shoulder. "You talk in an odd way, not like anybody else we know."

As he approached her, the strange girl gave him one quick look. "Oh, well — thank you, yes, I will," she cried, in what seemed almost a parody of the high, girlish voices of the era. "Just a little lemon squash, I suppose, or something equally innocent. Shall I come with you?" When they reached the drinks, she said, without looking at him, "What are you going to have? And what's your name, please?"

"Mark Denbow. And you're Ann something, aren't you?"

"I'm Ann —" and then she broke off abruptly, as if she had changed her mind about telling him her surname.

"And I am going to have some whisky," he said firmly.

The footman poured out a lemon squash for Ann while Mark helped himself to the largest whisky-and-soda he ever remembered having. But this was neither greed nor desperation; the glasses were so large that they made a giant helping inevitable. It was very good whisky too. But not many of the other men were drinking it, he noticed; they were asking for brandy-and-soda. All the girls were sipping soft drinks.

"I don't like this lemon squash," cried Ann suddenly, her voice higher than ever. "Mr. Denbow, would you think me terribly wicked if I asked you to get me a whisky?"

"No." He could never see her face properly. But he saw what was wrong with her hair: it had been padded out with false hair that was not quite the same color.

"Well, all the rest would." She giggled. "So you'd better pretend it's for yourself. Look, I'll hold your glass, and you take back this lemon stuff."

The whisky he brought her was not much smaller than the one he had given himself. "We'll go in a corner with these," she announced, and led the way. They sat on an old leather settee where there wasn't much light. "Nobody'll bother about us here. Or do you want somebody to bother about you?"

"No, I don't."

"Are you the one who was rescued from the lake? Yes? Well, we're a pair then. Look, they're going to dance again. Wouldn't you like to go whizzing around again with one of those jolly fat girls?"

"I'd rather stay here," said Mark. "But don't you want to dance?"

"Never, never, never." She took a good long drink and cried: "My, that's strong. No, no dancing for me. I can't bear any of this. Not just because I look like a freak among all these frilly, bosomy girls. It's like a sort of children's party with everybody three times the right size. I hate it."

She had stopped talking in that ridiculous high, girlish voice. She turned and looked at him, so that even in that bad light he was able at last to see her face properly. And now she didn't look thin or ill or grotesque; she looked

beautiful. For several moments, in silence, they stared at each other.

It was then that he found the first crack in this other time. As he stared at her, wondering at her beauty, everything but her face changed. They were somewhere else and — what was more important — in his own time, as he knew at once when he saw behind her the bookshelves of the school library. Just beyond her cheekbone were the green volumes of the cheap reprint of the Cambridge Modern History; so he knew exactly where they were. And without looking around he knew too that Dorothy and Maud and Archie and Ronald and Captain Waterhouse and the footman and the piano and the lighted smoking room had vanished.

She gave a sharp exclamation. Then they were back in the old smoking room, and Captain Waterhouse was playing a polka, and the hearty men, in their black and white, were taking hold of the plump, pastel girls.

Her hand fastened onto his, and her sharp nails were pressing into his palm. "Don't ask me why I am doing this," she muttered. "Just let me do it, there's a good man. I can't explain. And if I did, you wouldn't believe me."

"Yes, I would. Because I can explain too."

"No, you can't," she said crossly. "And don't start being clever and showing off. Just be a comfort. Or leave me alone."

He smiled at her, and then indicated the prancing girls, billowing in their full skirts. "*They* wouldn't talk to me like that. And you shouldn't."

"Right both times," she said gloomily. She had wonderful, dark hazel eyes; and the delicate yet strong molding of her face, with its wide cheekbones and hollows beneath, was a joy. "They wouldn't talk like that, and I oughtn't to. You were kind, too. I apologize." She jumped up. "But I can't stand any more of this. I'm going."

She was running out of the room while he was still pushing himself out of the deep settee. It was no use running after her. These people were fairly free and easy, but they might be annoyed if they saw the two interlopers running around the house. Perching himself on the end of the settee, he watched the dancers. They were there all right, solidly there, with nothing shadowy about them, all real people; but if they had been dolls performing the polka, he could not have felt further removed from them. And now the feeling of desolation returned. It had left him, he realized now, while he had been with the girl, Ann.

Just as he had decided to go and find her, if she were still somewhere downstairs, the dancing stopped; and the next moment Ronald and Dorothy Buller were barring his way.

"It's no use," Ronald said, smiling, "she won't stop talking about you."

"I only said you told fortunes," Dorothy said. "And Ronnie's dying to have his told, but won't admit it."

"If Denbow will tell my fortune, I'll be delighted," Ronald said. "What about it, old man?" Of all the young men there, he was the most handsome: golden-haired, pink-skinned, and with the bright blue eyes of a happy boy. Looking at him, Mark wondered if those stupid battles of the first World War, like that of Neuve-Chapelle which would blot Ronald from this earth, had not destroyed forever this vivid, masculine type. Although some Americans, in their own way, resembled it.

"Who's he going to marry?" Dorothy cried, while Mark still hesitated. "I'll bet you know, or think you do, just as you did with me — though of course you're all wrong about Geoffrey Purzley. Too absurd. But please go on; tell him. Marriage first."

"You girls and your marriages," Ronald said, fingering his mustache. But he looked expectantly at Mark.

"I don't know," Mark said unhappily. "I believe you will marry, but I don't know who it is. Sorry!"

"Are you feeling all right, Denbow?" Ronald asked.

"No, you're not, are you?" Dorothy said, anxious now. She was staring hard at him, with a flicker almost of fear in her eyes.

"I feel . . . a bit peculiar," Mark said carefully. But he knew in fact that something odd was happening. It was as if the years were coming between him and them like a sort of thickening of the air, in which all color was draining away and shapes losing their sharp edge. Their voices were still clear enough, but they seemed to be coming from farther away.

"Better turn in, old man," Ronald was saying. "Like me to give you a hand? Or I can ask one of the servants to show you up to your room."

"No, thank you," Mark said. "I think I'm finding it rather hot in here. I'll take a turn outside. Excuse me."

As he slowly crossed the room, he heard the piano again behind him, starting another waltz; but its tinkle was far away, like that of a piano heard distantly in the night. He turned at the door for a last look at the dancers, suddenly convinced that he would never see them again. There was no color at all in the scene now. They were shadows, waltzing to the tiny ghost of a tune.

He made his way along a corridor to the large front hall. There he saw the old butler preparing to bolt the great doors. "Just a minute," he cried, hurrying forward. "I want to go out."

The old man never looked up but reached down toward another bolt. Probably he was deaf.

"No, hold it," Mark cried, now nearly at his elbow.

But the last bolts went home. The butler slowly straightened himself and then turned a completely blank face to Mark, who was not more than two

feet away from him. And Mark realized that the man could neither see nor hear him. So far as this butler was concerned, he no longer existed — or rather had not come into existence. Yet the hall to Mark was still the hall of a night in 1902, had not yet turned itself back again into the hall he knew so well.

He stayed there for a few minutes after the butler had gone, wondering what to do. One thing he felt fairly certain about, that this evening of 1902, into which he had dived so inexplicably, would not last much longer for him. Already he himself had ceased to be a visible presence in the scene, and at any moment now, he felt, it might disappear from his sight and hearing, as it had done when he had suddenly seen Ann, for a few seconds, against the background of the school library. When he had seen her, in fact, in his own time, not in this other time. And did this mean that she *was* in his own time? He had already guessed she was, just after she had demanded some whisky and had talked as if she had made this time-jump too. He began wondering if she too were not invisible to these people of 50 years ago. He decided to go in search of her.

He found her in the large drawing room, sitting stiffly at the edge of a group of the older people. Although she was taking no part in the talk, he was certain that the others were clearly aware of her and that she was still part of the scene. He was equally certain that nobody was aware of him, not even Ann. But unlike the others, who never gave a glance in his direction when he arrived near them, Ann knew that something had happened. As he came near he saw a look of bewilderment cross her face. But he knew she had not actually seen him.

All the older and important guests seemed to be there: a politician, some general, a wealthy industrialist, a bleached old gnome of a banker; and Lord Broxwood himself, massive and purple, was with them, a sort of chairman. They were important and weighty men, and spoke of important and weighty affairs — the state of the country, of Europe, of the world, and the future of the country, of Europe, of the world. They were men of experience; they were experts in one field or another. So they made pontifical announcements; and without hesitation, unshadowed by any doubt, they made their solemn prophecies to the accompaniment of approving grunts and nods. Until Ann jumped up, fiery-eyed and a little shrill, and made her speech.

"I know this seems horribly rude and that you'll all be furious," she cried, "but I can't help it. Please listen for once — and stop being so grand and thinking you know everything. I've listened to you, haven't I? All about what's going to happen here in England, and what France will do to Italy, and Russia to Germany and all that —"

"Really, Miss — er —" Lord Broxwood began, turning a deeper shade of purple with annoyance. "I don't think —"

But Ann could not be stopped. "I know, I know. Who am I — and all that. But please, please listen for once. I shan't take long. But I must warn you that you're all talking nonsense. It may weigh a ton, but it's all just rubbish, bilge and rot. I know roughly what's going to happen during these next 50 years — never mind how, but I do — and I can assure you that it's all quite different from what you think. Nothing you've said is going to come true. Honestly it isn't. So you just might as well stop thinking you know it all, because you haven't a clue. Not one of you — not a clue. It's pathetic. And I'll never believe people like you again. Well, I *am* shutting up."

This final remark was addressed to Lord Broxwood, who at the risk of giving himself a fit of apoplexy was now lumbering forward, apparently ready to shut her up by force. Before he could reach her, Ann had turned and, finding herself facing an open French window, had bolted into the night. Mark hurried after her, followed her across the lawn, and finally caught up with her inside the old summerhouse. She was crying.

"Leave me alone," she mumbled, hearing him but not looking up. "I know I was damned rude, but you don't understand."

"Yes, I do," Mark said. "I'm just the one who does."

There was very little light in there, but it was not quite dark. She looked up, though it was probably his voice she recognized. "Oh, it's you again." She sounded much relieved. Indeed, he felt, she sounded delighted.

"You can see me now?" he asked.

"Not very well, of course, but I can see that it's you. Why?"

"You couldn't see me in that drawing room."

"Were you there?"

"Yes. But nobody knew."

"I felt that somebody came in," she said eagerly. "But I'll admit I didn't really see you. You heard me then?"

"You said just what I wanted to say." Mark was enthusiastic. "But I doubt if I'd have had the guts to say it."

She came closer, stared through the dark into his face, put out a hand and pressed it into the lapel of his coat, as if to make sure he was solid and real. "You're not one of them, are you? I wondered before, when you got me the whisky. But then I thought there couldn't be two of us. Oh, you've changed your suit."

"Why, no, I —" But then he felt the familiar soft collar round his neck, and one quick movement of a hand told him he was wearing his tweed coat and corduroy trousers.

"And I've changed my clothes. Thank Heaven!" she cried. "And look! Isn't the light from that drawing room different?"

It was the usual light that came from the main recreation room any night the students were using it. Before he knew what to say to her, they were crossing the lawn toward the uncurtained French windows. Above the confused sounds of voices and a subdued samba on the gramophone, they could hear the clatter of table-tennis balls. "Do you have tournaments?" Ann asked in an easy offhand way.

"Yes," he told her. "They're probably playing one tonight."

Then he drew in his breath sharply, noisily. How could she be standing there with him, looking through the window at the students and asking a question in that tone, as if she had already asked scores of questions and he was showing her around the school? As if she had never been back 50 years? As if neither of them had been back.

"What's the matter, Mr. Denbow?" she inquired innocently. "Are you cold? Shall we go in, back to the library?"

"Why, yes, we might as well." He heard himself say this, remotely, with all the questions buzzing in his mind.

Not wishing to disturb the students, they walked round to the side door and along the back corridor toward the library. He said nothing, not knowing what to say, still trying to understand what had happened. She was walking half a pace ahead of him, so that he could look at her without appearing ill-mannered: a mop of soft, dark hair; a figure, now trimly clothed, as delicate and strong as her face; yes, a beautiful girl, typical of the best of our time. But what about that other time? Didn't she know she had been there?

They had the corridor to themselves. Within a few feet of the library door, she stopped and turned on him. "Mr. Denbow, I like what you're doing here," she began, with a touch of severity, "though I thought I wouldn't. And I'm ready to like you. But I feel you resent me, and I think that's terribly unfair. I'm not my grandmother, you know."

"I'm sorry if I've behaved as if I thought you were your grandmother," said Mark, without a clue to what they were talking about. "And I've never met anybody I felt less like resenting. But let's talk in the library."

"In front of my grandmother? Surely that wouldn't be a good idea. That's why I stopped here."

"Oh, your grandmother's in the library, is she?" Mark stared at her blankly.

"Well, that's where we left her," Ann said impatiently. Then she looked at him curiously. "You don't look very good. Perhaps that little accident in the lake was worse than you thought."

"Just a minute," said Mark earnestly, going closer and lowering his voice. "Please tell me something. Have I been showing you around this place?"

"Why, of course, for the last hour. Then we went out for some air, and then you said you'd better take an aspirin and I said I'd wait for you in the old summerhouse — you remember?"

"This is terribly important." And he found himself gripping her just below each shoulder. "Tell me, please, what happened to you while you waited in the summerhouse? It doesn't matter how absurd it seems."

"Well, I had a confused sort of daydream — I'm a dreamy type though I may not look it. By the way, you're hurting my arms. But go on, if it helps. No, no apologies. I can see this is serious for you. You see, on the way here — perhaps you don't remember, but my grandmother and I are staying with some people called Ferrers at Winbone Manor, and I wanted to drive over, so she came with me — well, on the way here she was telling me how she used to stay here as a girl. She was the niece of the Lord Broxwood who owned it then. So I began imagining what it would be like here in those days — oh!" And she stared at him, as if she had suddenly remembered something.

"Ann," he whispered desperately, "I'm going to take a chance and say this now. Don't think I'm mad. I'm not. But I tell you I spent most of this evening there, in 1902 it was. And you were the strange girl who'd turned up in some queer way, just as I'd been rescued from the lake by the son of the house, a chap called Ronald. Then I saw how beautiful you were, yes, the most beautiful girl I'd ever known. And I knew you didn't belong to that time but to this. There were just the two of us in a different world that didn't understand. And I've never been really in love before, and I know this is it and whatever happens you'll always be the beautiful, strange girl who turns out not to be strange, but really the other one in a different world that couldn't understand. That's how it'll always be, whatever happens. Do I sound quite mad?"

"Yes," said Ann. "But I like it. Though of course there's a lot more you'll have to tell me."

The library door opened. "Don't stand there looking moon-struck," a sharp old voice cried. "Either come in or go somewhere else."

He felt he ought to have known at once that this grandmother would be Lady Purzley — one Dorothy Buller, bosomy and downy in pink.

"If you two were talking about adult education out there," Lady Purzley said, after examining their looks critically, "then I no longer understand anything."

"Yes, you do, darling," Ann cried, still glowing. "But it was a kind of adult education."

"I must say," the old lady said, turning to Mark, "you're a more enterprising young man than I had thought."

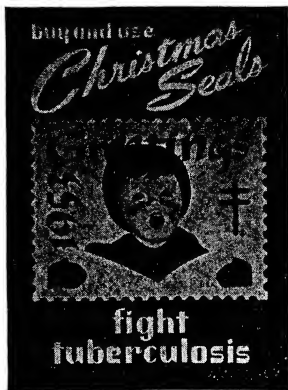
"I'm far more enterprising than I thought I was," Mark said, smiling at her. "By the way, Lady Purzley, when you stayed here as a girl, did a strange young man ever tell your fortune in the conservatory?"

"Now why should you ask me that, Mr. Denbow?"

"I just wondered."

"Because," Lady Purzley continued slowly, "I dozed a little after you two left me and dreamed I was back here as a girl, before I was even engaged to Geoffrey Purzley, and somebody told me I would marry him. But whether that really happened once or I merely dreamed it, I can't remember. It's often difficult to tell, you know. Things can be very complicated."

"So I've suspected."



On occasion Mr. Dick acts as a very able Boswell for Dr. Rupert Labyrinth, that venerable creator of utterly unpredictable devices. In this instance, the harried man has invented an Animator, a mechanism warranted to give life to inanimate objects. And so it does . . . on occasion. The miraculous machine — and this the doctor did not take into his calculations — also makes absolutely sure that the life it bestows is a happy one.

The Short Happy Life of the Brown Oxford

by PHILIP K. DICK

"I HAVE SOMETHING to show you," Doc Labyrinth said. From his coat pocket he gravely drew forth a matchbox. He held the matchbox tightly, his eyes fixed on it. "You're about to see the most momentous thing in all modern science. The world will shake and shudder."

"Let me see," I said. It was late, past midnight. Outside my house rain was falling on the deserted streets. I watched Doc Labyrinth as he carefully pushed the matchbox open with his thumb, just a crack. I leaned over to see.

There was a brass button in the matchbox. It was alone, except for a bit of dried grass and what looked like a bread crumb.

"Buttons have already been invented," I said. "I don't see much to this." I reached out my hand to touch the button but Labyrinth jerked the box away, frowning furiously.

"This isn't just a button," he said. Looking down at the button he said, "Go on! Go on!" He nudged the button with his finger. "Go on!"

I watched with curiosity. "Labyrinth, I wish you'd explain. You come here in the middle of the night, show me a button in a matchbox, and —"

Labyrinth settled back against the couch, sagging with defeat. He closed the matchbox and resignedly put it back in his pocket. "It's no use pretending," he said. "I've failed. The button is dead. There's no hope."

"Is that so unusual? What did you expect?"

"Bring me something," Labyrinth gazed hopelessly around the room. "Bring me — bring me *wine*."

"All right, Doc," I said, getting up. "But you know what wine does to people." I went into the kitchen and poured two glasses of sherry. I brought them back and gave one to him. We sipped for a time. "I wish you'd let me in on this."

Doc put his glass down, nodding absently. He crossed his legs and took out his pipe. After he had lit the pipe he carefully looked once more into the matchbox. He sighed and put it away again.

"No use," he said. "The Animator will never work, the Principle itself is wrong. I refer to the Principle of Sufficient Irritation, of course."

"And what is that?"

"The Principle came to me this way. One day I was sitting on a rock at the beach. The sun was shining and it was very hot. I was perspiring and quite uncomfortable. All at once a pebble next to me got up and crawled off. The heat of the sun had annoyed it."

"Really? A pebble?"

"At once the realization of the Principle of Sufficient Irritation came to me. Here was the origin of life. Eons ago, in the remote past, a bit of inanimate matter had become so irritated by something that it crawled away, moved by indignation. Here was my life work: to discover the perfect irritant, annoying enough to bring inanimate matter to life, and to incorporate it into a workable machine. The machine, which is at present in the back seat of my car, is called The Animator. But it doesn't work."

We were silent for a time. I felt my eyes slowly begin to close. "Say, Doc," I began, "isn't it time we —"

Doc Labyrinth leaped abruptly to his feet. "You're right," he said. "It's time for me to go. I'll leave."

He headed for the door. I caught up with him. "About the machine," I said. "Don't give up hope. Maybe you'll get it to work some other time."

"The machine?" He frowned. "Oh, the Animator. Well, I'll tell you what. I'll sell it to you for \$5."

I gaped. There was something so forlorn about him that I didn't feel like laughing. "For how much?" I said.

"I'll bring it inside the house. Wait here." He went outside, down the steps and up the dark sidewalk. I heard him open the car door, and then grunt and mutter.

"Hold on," I said. I hurried after him. He was struggling with a bulky square box, trying to get it out of the car. I caught hold of one side, and together we lugged it into the house. We set it down on the dining table.

"So this is the Animator," I said. "It looks like a Dutch oven."

"It is, or it was. The Animator throws out a heat beam as an irritant. But I'm through with it forever."

I took out my wallet. "All right. If you want to sell it, I might as well be the one who buys it." I gave him the money and he took it. He showed me where to put in the inanimate matter, how to adjust the dials and meters, and then, without any warning, he put on his hat and left.

I was alone, with my new Animator. While I was looking at it my wife came downstairs in her bathrobe.

"What's going on?" she said. "Look at you, your shoes are soaked. Were you outside in the gutter?"

"Not quite. Look at this oven. I just paid \$5 for it. It animates things."

Joan stared down at my shoes. "It's 1 o'clock in the morning. You put your shoes in the oven and come to bed."

"But you don't realize —"

"Get those shoes in the oven," Joan said, going back upstairs again. "Do you hear me?"

"All right," I said.

It was at breakfast, while I was sitting staring moodily down at a plate of cold eggs and bacon, that he came back. The doorbell commenced to ring furiously.

"Who can that be?" Joan said. I got up and went down the hall, into the living room. I opened the door.

"Labyrinth!" I said. His face was pale, and there were dark circles under his eyes.

"Here's your \$5," he said. "I want my Animator back."

I was dazed. "All right, doc. Come on in and I'll get it."

He came inside and stood, tapping his foot. I went over and got the Animator. It was still warm. Labyrinth watched me carrying it toward him.

"Set it down," he said. "I want to make sure it's all right."

I put it on the table and the Doc went over it lovingly, carefully, opening the little door and peering inside. "There's a shoe in it," he said.

"There should be two shoes," I said, suddenly remembering last night. "My God, I put my shoes in it."

"Both of them? There's only one now."

Joan came from the kitchen. "Hello, Doctor," she said. "What brings you out so early?"

Labyrinth and I were staring at each other. "Only one?" I said. I bent down to look. Inside was a single muddy shoe, quite dry, now, after its night in Labyrinth's Animator. A single shoe — but I had put two in. Where was the other?

I turned around but the expression on Joan's face made me forget what I was going to say. She was staring in horror at the floor, her mouth open.

Something small and brown was moving, sliding toward the couch. It went under the couch and disappeared. I had seen only a glimpse of it, a momentary flash of motion, but I knew what it was.

"My God," Labyrinth said. "Here, take the \$5." He pushed the bill into my hands. "I really want it back, now!"

"Take it easy," I said. "Give me a hand. We have to catch the damn thing before it gets outdoors."

Labyrinth went over and shut the door to the dining room. "It went under the couch." He squatted down and peered under. "I think I see it. Do you have a stick or something?"

"Let me out of here," Joan said. "I don't want to have anything to do with this."

"You can't leave," I said. I yanked down a curtain rod from the window and pulled the curtain from it. "We can use this." I joined Labyrinth on the floor. "I'll get it out, but you'll have to help me catch it. If we don't work fast we'll never see it again."

I nudged the shoe with the end of the rod. The shoe retreated, squeezing itself back toward the wall. I could see it, a small mound of brown, huddled and silent, like some wild animal at bay, escaped from its cage. It gave me an odd feeling.

"I wonder what we can do with it?" I murmured. "Where the hell are we going to keep it?"

"Could we put it in the desk drawer?" Joan said, looking around. "I'll take the stationery out."

"There it goes!" Labyrinth scrambled to his feet. The shoe had come out, fast. It went across the room, heading for the big chair. Before it could get underneath, Labyrinth caught hold of one of its laces. The shoe pulled and tugged, struggling to get free, but the old Doc had a firm hold of it.

Together we got the shoe into the desk and closed the drawer. We breathed a sigh of relief.

"That's that," Labyrinth said. He grinned foolishly at us. "Do you see what this means? We've done it, we've really done it! The Animator worked. But I wonder why it didn't work with the button."

"The button was brass," I said. "And the shoe was hide and animal glue. A natural. And it was wet."

We looked toward the drawer. "In that desk," Labyrinth said, "is the most momentous thing in modern science."

"The world will shake and shudder," I finished. "I know. Well, you can consider it yours." I took hold of Joan's hand. "I give you the shoe along with your Animator."

"Fine." Labyrinth nodded. "Keep watch here, don't let it get away."

He went to the front door. "I must get the proper people, men who will —"
"Can't you take it with you?" Joan said nervously.

Labyrinth paused at the door. "You must watch over it. It is proof, proof the Animator works. The Principle of Sufficient Irritation." He hurried down the walk.

"Well?" Joan said. "What now? Are you really going to stay here and watch over it?"

I looked at my watch. "I have to get to work."

"Well, I'm not going to watch it. If you leave, I'm leaving with you. I won't stay here."

"It should be all right in the drawer," I said. "I guess we could leave it for awhile."

"I'll visit my family. I'll meet you downtown this evening and we can come back home together."

"Are you really that afraid of it?"

"I don't like it. There's something about it."

"It's only an old shoe."

Joan smiled thinly. "Don't kid me," she said. "There never was another shoe like this."

I met her downtown, after work that evening, and we had dinner. We drove home, and I parked the car in the driveway. We walked slowly up the walk.

On the porch Joan paused. "Do we really have to go inside? Can't we go to a movie or something?"

"We have to go in. I'm anxious to see how it is. I wonder what we'll have to feed it." I unlocked the door and pushed it open.

Something rushed past me, flying down the walk. It disappeared into the bushes.

"What was that?" Joan whispered, stricken.

"I can guess." I hurried to the desk. Sure enough, the drawer was standing open. The shoe had kicked its way out. "Well, that's that," I said. "I wonder what we're going to tell Doc?"

"Maybe you could catch it again," Joan said. She closed the front door after us. "Or animate another. Try working on the other shoe, the one that's left."

I shook my head. "It didn't respond. Creation is funny. Some things don't react. Or maybe we could —"

The telephone rang. We looked at each other. There was something in the ring. "It's him," I said. I picked up the receiver.

"This is Labyrinth," the familiar voice said. "I'll be over early tomorrow."

They're coming with me. We'll get photographs and a good write-up. Jenkins from the lab —"

"Look, Doc," I began.

"I'll talk later. I have a thousand things to do. We'll see you tomorrow morning." He clicked off.

"Was it the Doctor?" Joan said.

I looked at the empty desk drawer, hanging open. "It was. It was him, all right." I went to the hall closet, taking my coat off. Suddenly I had an eerie feeling. I stopped, turning around. Something was watching me. But what? I saw nothing. It gave me the creeps.

"What the hell," I said. I shrugged it off and hung my coat up. As I started back toward the living room I thought I saw something move, out of the corner of my eye.

"Damn," I said.

"What is it?"

"Nothing. Nothing at all." I looked all around me, but I could not pin anything down. There was the bookcase, the rugs, the pictures on the walls, everything as it always was. But something had moved.

I entered the living room. The Animator was sitting on the table. As I passed it I felt a surge of warmth. The Animator was still on, and the door was open! I snapped the switch off, and the dial light died. Had we left it on all day? I tried to remember, but I couldn't be sure.

"We've got to find the shoe before nightfall," I said.

We looked, but we found nothing. The two of us went over every inch of the yard, examining each bush, looking under the hedge, even under the house, but without any luck.

When it got too dark to see we turned on the porch light and worked for a time by it. At last I gave up. I went over and sat down on the porch steps. "It's no use," I said. "Even in the hedge there are a million places. And while we're beating one end, it could slip out the other. We're licked. We might as well face it."

"Maybe it's just as well," Joan said.

I stood up. "We'll leave the front door open tonight. There's a chance it might come back in."

We left it open, but the next morning when we came downstairs the house was silent and empty. I knew at once the shoe was not there. I poked around, examining things. In the kitchen eggshells were strewn around the garbage pail. The shoe had come in during the night, but after helping itself it had left again.

I closed the front door and we stood silently, looking at each other. "He'll

be here any time," I said. "I guess I better call the office and tell them I'll be late."

Joan touched the Animator. "So this is what did it. I wonder if it'll ever happen again."

We went outside and looked around hopefully for a time. Nothing stirred the bushes, nothing at all. "That's that," I said. I looked up. "Here comes a car, now."

A dark Plymouth coasted up in front of the house. Two elderly men got out and came up the path toward us, studying us curiously.

"Where is Rupert?" one of them asked.

"Who? You mean Doc Labyrinth? I suppose he'll be along any time."

"Is it inside?" the man said. "I'm Porter, from the University. May I take a peek at it?"

"You'd better wait," I said unhappily. "Wait until the Doc is here."

Two more cars pulled up. More old men got out and started up the walk, murmuring and talking together. "Where's the Animator?" one asked me, a codger with bushy whiskers. "Young man, direct us to the exhibit."

"The exhibit is inside," I said. "If you want to see the Animator, go on in."

They crowded inside. Joan and I followed them. They were standing around the table, studying the square box, the Dutch oven, talking excitedly.

"This is it!" Porter said. "The Principle of Sufficient Irritation will go down in —"

"Nonsense," another said. "It's absurd. I want to see this hat, or shoe, or whatever it is."

"You'll see it," Porter said. "Rupert knows what he's doing. You can count on that."

They fell into controversy, quoting authorities and citing dates and places. More cars were arriving, and some of them were press cars.

"Oh, God," I said. "This will be the end of him."

"Well, he'll just have to tell them what happened," Joan said. "About its getting away."

"We're going to, not him. We let the thing go."

"I had nothing to do with it. I never liked that pair from the start. Don't you remember, I wanted you to get those ox-blood ones?"

I ignored her. More and more old men were assembling on the lawn, standing around talking and discussing. All at once I saw Labyrinth's little blue Ford pull up, and my heart sank. He had come, he was here, and in a minute we would have to tell him.

"I can't face him," I said to Joan. "Let's slip out the back way."

At the sight of Doc Labyrinth all the scientists began streaming out of the house, surrounding him in a circle. Joan and I looked at each other. The house was deserted, except for the two of us. I closed the front door. Sounds of talk filtered through the windows; Labyrinth was expounding the Principle of Sufficient Irritation. In a moment he would come inside and demand his shoe.

"Well, it was his own fault for leaving it," Joan said. She picked up a magazine and thumbed through it.

Doc Labyrinth waved at me through the window. His old face was wreathed with smiles. I waved back halfheartedly. After awhile I sat down beside Joan.

Time passed. I stared down at the floor. What was there to do? Nothing but wait, wait for the Doc to come triumphantly into the house, surrounded by scientists, learned men, reporters, historians, demanding the proof of his theory, the shoe. On my old shoe rested Labyrinth's whole life, the proof of his Principle, of the Animator, of everything.

And the damn shoe was gone, outside someplace!

"It won't be long now," I said.

We waited, without speaking. After a time I noticed a peculiar thing. The talk outside had died away. I listened, but I heard nothing.

"Well?" I said. "Why don't they come in?"

The silence continued. What was going on? I stood up and went to the front door. I opened it and looked out.

"What's the matter?" Joan said. "Can you see?"

"No," I said. "I don't get it." They were all standing silently, staring down at something, none of them speaking. I was puzzled. I could not make sense out of it. "What's happening?" I said.

"Let's go and look." Joan and I went slowly down the steps, onto the lawn. We pushed through the row of old men and made our way to the front.

"Good Lord," I said. "Good Lord."

Crossing the lawn was a strange little procession, making its way through the grass. Two shoes, my old brown shoe, and just ahead of it, leading the way, another shoe, a tiny white high-heeled slipper. I stared at it. I had seen it someplace before.

"That's mine!" Joan cried. Everyone looked at her. "That belongs to me! My party shoes —"

"Not anymore," Labyrinth said. His old face was pale with emotion. "It is beyond us all, forever."

"Amazing," one of the learned men said. "Look at them. Observe the female. Look at what she is doing."

The little white shoe was keeping carefully ahead of my old shoe, a few inches away, leading him coyly on. As my old shoe approached she backed away, moving in a half circle. The two shoes stopped for a moment, regarding each other. Then, all at once, my old shoe began to hop up and down, first on his heel, then on his toe. Solemnly, with great dignity, the shoe danced around her, until he reached his starting point.

The little white shoe hopped once, and then she began again to move away, slowly, hesitantly, letting my shoe almost catch up to her before she went on.

"This implies a developed sense of mores," an old gentleman said. "Perhaps even a racial unconscious. The shoes are following a rigid pattern of ritual, probably laid down centuries —"

"Labyrinth, what does this mean?" Porter said. "Explain it to us."

"So that's what it was," I murmured. "While we were away the shoe got her out of the closet and used the Animator on her. I knew something was watching me, that night. She was still in the house."

"That's what he turned on the Animator for," Joan said. She sniffed. "I'm not sure I think much of it."

The two shoes had almost reached the hedge, the white slipper still just beyond the laces of the brown shoe. Labyrinth moved toward them.

"So, gentlemen, you can see that I did not exaggerate. This is the greatest moment in science, the creation of a new race. Perhaps, when mankind has fallen into ruin, society destroyed, this new life form —"

He started to reach for the shoes, but at that moment the lady shoe disappeared into the hedge, backing into the obscurity of the foliage. With one bound the brown shoe popped in after her. There was a rustling, then silence.

"I'm going indoors," Joan said, walking away.

"Gentlemen," Labyrinth said, his face a little red, "this is incredible. We are witnessing one of the most profound and far-reaching moments of science."

"Well, *almost* witnessing," I said.



To our minds, this strangely but fittingly titled story, like so much of the work of Robert Abernathy, typifies modern science fiction at its best: primarily a small-scale story of recognizable human characters and problems, yet embodying a logically developed and completely surprising new idea — a balance of the emotional quality of main-stream fiction with a provocative conceptual element peculiar to this more imaginative type of narrative.

Axolotl

by ROBERT ABERNATHY

The axolotl is a mudpuppy with an Aztec name, an unlovely creature with a whitish, flabby, unfinished-looking body, with tiny eyes, feeble limbs, and a big clumsy tail. It is a member of the Amphibia, that class of vertebrates which, in the age of the armored fishes, first crawled out of the water to begin the great adventure of air-breathing existence. But the axolotls are degenerate, amphibians whose life-cycle has aborted; they reach sexual maturity, spawn, and die in the dark ooze, breathing through gills beneath stagnant waters, for generation after generation, just as if that great Paleozoic invasion of the dry land had ended in retreat.

At some times and places, though, when food grows scant or enemies many on the lake bottom — or for other, more subtile reasons buried somewhere under a blunt primitive skull or in the glandular mechanism of an ungainly body — a change begins. Instinct-driven, the creature moves, with the sureness of direction that in a higher life form would be called purpose, toward the shallow water, the light, and the air it cannot breathe. Painfully it creeps ashore. In the unfamiliar element, its fringed gills shrivel, and it writhes. . . .

AS THEY PASSED through the gate, Linden returned the sentries' salutes, scarcely aware of them; but after his back was turned, he seemed to see them nudging one another: "That's him! Yeah, better take a good look now; may not get another chance."

And the other, perhaps: "No kidding? He don't look that crazy."

Linden bit his lip, and cursed his imagination. Deliberately he bent his head and kept his eyes fixed on the solid reality of the asphalt roadway, half-covered by the eternally wind-driven sand. It was quiet here as they walked.

After some 50 paces, he halted suddenly, and took a deep breath of the clean air — the breeze was still cool, though it would not remain cool for long — and looked up. Less than a hundred yards away, the concrete apron began, and beyond it was the steel skeleton of the launching platform, and above that, steep and gleaming, towered the magnesium spire of the rocket.

His eyes, irresistibly drawn upward, followed the line of its vertical axis, toward the imaginary, precisely calculated point up there somewhere at infinity. Tonight the stars would be beacons. But now there was only traceless and depthless blue.

A mile away a transport muttered, sliding down a slope of air toward the landing field; and far overhead a black buzzard sailed, passed perhaps directly through that imaginary line to infinity, and sailed on unknowing.

But the rocket was no kin to these. It was wingless, without even external steering vanes, and the sea of air many miles deep above it was no more to it than a veil to be thrust aside. It could function at its best only in hard vacuum, at a velocity of miles per second.

Linden's jaw muscles tightened and his breath came quickly. . . . Beside him, Marty said softly, "Look at that. She can hardly wait for tonight."

Something in the tone made Linden glance sidelong. Marty was hunched a little forward, and his eyes, under their shaggy scowling brows, were greedy on the spaceship. His whole posture, more than the expression of his face, betrayed a longing that was hopeless, a hopeless jealousy. Linden looked away with embarrassment.

"Seems like it," he answered in mechanical agreement. Nobody disagreed with Marty, who knew that machines have souls — hard, metallic souls, never planned by the designers, capable, with the unpredictability that is of the essence of life, both of fearful treachery and of loyalty past understanding.

Marty's knowledge of this dated from the time when — immobilized by a splintered spine, the one man left alive and conscious after the flakfires and the fighters — he had been a helpless spectator while a great airplane, itself almost mortally wounded, no hand at its controls, had fought for its life for a quarter of an hour in the air over Germany, and won. Neither laughter nor logic could shake his belief.

Possibly that accounted for his genius. At his touch motors purred fierce delight, and complex circuits were quick to answer his unworded questions. When tonight the rocket roared and went skyward, the hand of some Important Person would have tripped the last switch; but it would be the immaterial hand of Marty — his body earthbound by its damaged back — that opened and closed the vital relays, metered fuel to the ravening engine, kept instruments and gauges true.

Linden's gaze rested again on the ship. And he thought: *It does look anxious to be gone . . . out there where it belongs. Even a fool or a total stranger could see that it wasn't made for any purpose on Earth . . . no wheels, no tracks or fins or wings, only the sharp nose pointing straight up to nowhere.*

He retreated from the feeling, at once terrifying and fascinating, that he stood in the presence of something alien. Maybe it had been a mistake to come out here — or maybe it had been a mistake to come with Marty. He groped for the hard comfort of facts.

"Everything'll be fully automatic, from orbit to oxygen. There'll be nothing for me to do, and not much for me to see — nothing that the cameras won't see better." He laughed shortly. "The whole thing sounds about as thrilling as an eight-hour subway ride."

Marty didn't look at him. "She could go by herself. . . . I wonder if she'd rather."

Linden's taut nerves frayed. "That's a hell of a way to put it. You mean: we know machines can take conditions out there, because we've sent them and they've come back. But we're not really sure what space may do to a man. So — that's why I'm going, whether your girl-friend wants my company or not."

"You know what I think. We ought to try a few more unmanned shots, first."

"We've already found out all we can that way; the instruments haven't been invented, and won't be invented this year or this century, that would let us predict every way space might affect the human body. We could do that if we had no end of time and resources — and if we knew all about the human body. But we haven't, and we don't."

Marty was frozenly silent.

"But the animals survived. And Davidson went up, into hard space, and came back all right."

"For five minutes," said Marty. "You stick your toe in the water to see if it's cold, and stick your finger in and taste it to see if it's poison . . . and then you jump in to see if it'll drown you."

They had turned face to face, and their eyes locked. The argument was a flimsy excuse. The tension that had been building was deeper-rooted, and for a moment now it flashed almost into hatred.

Then Marty looked back toward the rocket. One corner of his mouth twitched grievously.

Linden turned toward the gate where the curious sentries were watching.

". . . Thought you wanted to check up personally?"

"No point to it. *You've* checked everything, haven't you?"

"Yes . . . Yes, she'll make the trip."

Linden walked along the shadeless street. The breeze was getting hot and the new buildings smelled of raw pine lumber brought down from the mountains that rose blue and brown and green along the skyline, over the rooftops. There was little activity this morning; everything was finished and ready and waiting, like the rocket standing out there in the desert with its perfect magnesium skin dazzling in the sunshine. The street was as empty as the morning that stretched before him; in the afternoon, at least, there would be a few perfunctory final tests, though all the important ones, with the compression chambers and the centrifuges and the test shots, were already behind him.

He opened the door and stopped short. His heart bounded up crazily for a moment; then, as the glare he had just left ceased to blind him, skidded back to fairly near normal again, and he said quietly, "Hello, Ruth."

After the first glimpse, he could see plainly that she had not come to ask for quarter, but to offer it. So there would be no peace, and she shouldn't have come at all.

"Listen, Jim. I talked to the General yesterday —"

"I know you did. So did I."

But she ignored the wry interruption, rushing on: "— and he admitted that there are several other men who would be qualified to go as well as you. Several others — and you told me —"

"Yes, I know," he broke in again. "That was half a lie — because it seemed so much simpler that way. But since you saw the General, I had to tell a full-sized lie. I had to tell him you and I were through, that I didn't give a damn about you any more."

She stared, arrested, her mouth shaping a voiceless "Why?"

"Because some fool psychologist might decide that an emotional entanglement was reason enough to wash me out of this trip."

"And you don't think it is."

He couldn't keep on being brutal. He avoided her eyes and was silent.

"We were going to have a house and a garden, in the country, with a view from a hill, and a place for picnics, and room for children. . . ." Her voice shook, but she went on, "Remember, Jim? We were going to be like other people, the lucky other people. And look at the moon only through the tree branches, and let somebody else worry about going miles higher and miles faster. . . ."

"It can still be like that."

She didn't listen. "Now I've found out," she said wonderingly, "what I should have known before. You aren't doing this because of duty, or science, or any of the fine excuses. There are lots of others that could do it. You want it for yourself. You want to go up into the dark in a blaze of

glory . . . and when you come back down, if you come back, I won't be waiting for you. You know that."

He took one step and caught her arms in a tense grip — only for a moment; she did not either resist or respond, and he let his hands fall as if the touch of her had burned him. He said thickly, "You're doing all this by yourself. It's only your imagination . . . senseless, unreasonable!"

Ruth shook her head. "I'm not imagining."

"The test animals came back all right, didn't they?"

"Yes . . . and in the next generation, there were the little mice with no eyes, and the rabbits that couldn't hop because their bones were wrong, and —"

"Only a very few. I've told you over and over: the chance is negligible."

"The cosmic rays did that, up there where you mean to go. I won't risk having children like that, not even yours. Can't you understand that in some things any chance is too much to take?" Her voice had risen till it ended in a sob.

"You're not being logical," he said helplessly. "There are always chances. . . ." He took a deep breath. "Ruth, if you'll listen, I'll try to explain . . . just why it's got to be me. Then you'll probably say that I don't make sense."

She sat obediently on the edge of a chair, watching him as he paced.

"I never told you, did I, about the time I fell out of the hayloft?" He turned abruptly to face her. "I didn't fall. I jumped. . . . It was on my uncle's farm, the summer when I was twelve. They had a huge red barn, like you see all through the Midwest, and at hay harvest they drove the loaded wagons up and pitched the hay through the door high up in the gable-end. Some of us kids had a great time, playing in the springy soft hay and looking out of the loft, over the fields and far away.

"But that evening after supper, when the work was done and the men had left, I climbed up in the barn by myself, and looked out the loft door, down into the empty yard. It must have been about fifteen feet down, but to a twelve-year-old kid all alone it looked like a mile. . . . So I jumped."

"And what happened?"

"I broke an ankle," said Linden drily. "But I didn't regret it, then or ever. For a moment, there — or rather, for about a second, which is how long it takes to fall fifteen feet — I found something I'd been looking for without knowing, and that I've been looking for, finding again and losing, ever since . . . The Jumping Off Place," he finished, and could have bitten his tongue, for he hadn't meant to use that phrase; it was foolish-sounding, and a secret thing of his own.

"Jim, that's crazy." Her eyes upon him were wide and troubled, but he met them squarely now.

"All my life I've been looking for that Place. That's why, when the war came, I joined the paratroopers, and why I haven't been able to keep away from aircraft and rocket research.

"For eight hours, while the rocket travels in its orbit twice around the planet, it will be in free fall. Free — of gravity, that holds us in prison ordinarily from one end of our lives to the other. A body in free fall is weightless, and that's the only way it can be; even theoretically there's no other way to beat gravity. The man in the rocket will experience eight hours of a state that nobody has ever known before for more than a few seconds — during a parachute drop, in a diving plane sometimes. And then in dreams. Almost everybody has those dreams, you know, of flying, not as a bird or an airplane flies, but floating, unchained from the pull of the Earth. It's a normal human longing, I think; I just happen to be more conscious of it than most people.

"I *had* to be the one. When I heard they'd perfected the nuclear jet and were really going to try it — I let you think they insisted I come here; well, it was the other way around; I moved heaven and earth to get in."

She said shakily, "Didn't you ever think . . . that there must have been other boys who jumped out of haylofts, too?"

He looked past her, not seeing her, seeing instead the rocket agleam in the desert and ready. "No doubt," he said. "But I've found the Jumping Off Place, Ruth, and it's mine."

She rose and stood straight. "I've waited. I've cried when I saw the headlines saying they were going to make something to go higher and faster. I've prayed you'd be hurt, crippled even, so you couldn't go on. . . . But now we've come to the Jumping Off Place; and I won't be waiting any more."

Linden turned his face away. He called himself coward, fool, and traitor, and he said aloud: "All right. If it's got to be that way."

The rocket's voice in the beginning was like the unsealed thunders of *Revelations*. As the ship climbed, the sound rose steeply in pitch, till it was like a million banshees keening for the extinction of the human race. And as the velocity still increased it went up still further to an almost supersonic note that shivered on the threshold of hearing and vibrated agonizingly in nerves and bones and blood.

He lay pinioned and helpless, cradled in fluid as he had been in his mother's womb. Arms, legs, head, spine strained cruelly beneath the

burden of their own intolerable weight. Each breath was a mighty effort and each breath went out of him as breath goes out of a man hit over the heart.

And the rocket screamed and climbed — up where the air was too thin for wings; up where there was no air but only hurtling ions, particles traveling at enormous velocities and charged with enormous voltages; up into the domain of the primary cosmic, of radiation that it would be pointless to call merely "hard," radiation compared to which the gamma-blast from an atomic explosion is like the soft pattering of summer rain in comparison to machine-gun fire.

The automatic controls, the feedback circuits, the computing instruments did their work, seeking the orbit-to-be far out in space. The meter-bank above Linden was blurred and dim; the muscles of his eyes were not strong enough to focus them against the pressure of acceleration. His body weighed a thousand pounds. He was paying now for the weightlessness he would experience when the rocket began to orbit.

His consciousness was a fading spark when the projectile's vibration changed and the awful pressure diminished. Thirty seconds later the same thing happened again, and now breathing was easier and cramped muscles could relax a little from their torture. The rocket was approaching its burnout, swinging into the four-hour orbit, and the prepared relays were cutting its acceleration one gravity at a time, so that the change would not be too brutally abrupt.

The next-to-last stage was reached and for 30 seconds his weight seemed normal as the nuclear engine idled at one-gravity thrust. Linden moved aching limbs, working himself free of the plastic-fluid cocoon that had protected him. His still-blurred vision slid over the instrument bank, sought the tinted mirrors that would give him an outside view without exposing his eyes to the blaze of the unveiled heavens. . . .

Then the engine cut out altogether, and there was deadly silence inside the rocket as it began to fall.

Linden's movements sent him floating free, across the little cabin — slowly, lazily in relation to the things around, while his every reflex shrieked that he and the ship around him were falling, falling from the great height, and aroused glands poured fear-secretions through his blood, and instinctively reacting nerves made his muscles tense and the sweat start out all over his body. His unconscious mind cowered and waited for the obliterating, inevitable smash — the smash that would never come, for the rocket was falling forever, plunging endlessly along the curvature of space in a trajectory of no return.

In the mirrors were the naked stars, mercilessly brilliant and unwinking.

The ship was a little metal bubble risen from the air-ocean into the great vacuum, with a trapped organism inside it, around it illimitable space — airless, lifeless, and yet not empty.

The ship swam in the fierce bath of radiation. To the primary cosmic rays that blaze through space, its metal walls and the human body within them were as transparent and unsubstantial as some frail jellyfish aswim in the equally refracting medium of the sea.

His hands clawed for support and found none. The myriad mirrored stars seemed to flare into novae and whirl around him. A voice screamed hoarsely, that must be his own, for there was no other human being in all space. He was falling down, down, and down into dizzy and searing darkness. . . .

His memory of the time that followed was disjointed and fragmentary — whether of hours, days, an eternity, he could not tell. He preserved a clear image of himself, flapping and floundering in air like some grotesque wingless bird and laughing hysterically as the metal strut in his hand — it must have been wrested from the acceleration-couch bracings — swung, smashed, pounded . . . Glass sprayed in slow-motion and did not fall, the staring meters went blind and blank as he wrecked beyond repair the delicate instruments without which the ship could not return to Earth. A cable ripped loose from the automatic control system floated like a coiling snake and spat blue fire, and he laughed. . . .

And another image stood stark and clear. He was stifling. The oxygen tanks must have failed — or had he smashed them, too? — and his sense of smothering grew momentarily more desperate, though he drew in great gasping breaths heedless of the glass splinters that floated and glittered, and though at the same time a strange fire seemed to race through his veins and invest him with demoniac strength. . . . *Finish it!* shrieked a voice deep within him, and he made his way to the airseal door and attacked it savagely. The door had never been made to be unsealed in space, but neither had it been constructed to withstand such an assault from within. It gave way, and the blast of escaping air whipped it out and away.

As it went, Linden glimpsed the vast cloudy globe of Earth, floating out there, cool and unreachable. Braced against the brief outrush of the ship's tiny atmosphere, he took one last choking breath, and thought: *Goodbye Earth . . . Ruth . . . goodbye . . .*

Instinct-driven, the axolotl moves, with the sureness of direction that in a higher life form would be called purpose, toward the shallow water, the light, and the air it cannot breathe. Painfully it creeps ashore. In the unfamiliar element, its fringed gills shrivel, and it writhes. . . .

And the larval husk, the pallid skin of the ooze-dweller, bursts and is shed. From it emerges a new creature, lizard-slender, beady-eyed, splendidly striped in gold and black: the true adult of the species, the tiger salamander.

A push sent Linden floating easily forward of the ship, twisting in midair to avoid collision with bare frame members that remained where he had torn out the bulkhead separating the pressure cabin from the instrument and engine compartments sternward. The partition had been useless, of course, since he had let the air out of the vessel, and he had needed the materials it contained.

He checked his leisurely flight and hovered beside the radio sender-receiver. Its working parts, exposed by the removal of a section of control panel, had been rearranged and altered in ways that would have made an Earthly technician raise eyebrows in scorn — and justly so, since the apparatus as it was now would have been of no possible use . . . on Earth.

Methodically Linden finished placing and adjusting the bits of wire and glass he had taken from one of the dismantled measuring devices aft.

He gazed thoughtfully at his own hands. They had become very brown in the last fortnight, and the nails — feeble vestiges that they were of the great claws of the ancestral brute — had sloughed off. At the same time, the exposed tips of his fingers had become mobile, so that he could make fine adjustments without employing the grosser muscles that moved the entire finger.

Converting the radio to new purposes had proved much easier than the changes he had made in the ship's driving mechanism — perhaps because the task was less difficult, or perhaps because, as he sensed to be true, the changes in his own mind and body were still progressing. Far more important than the visible, superficial changes were the unseen ones — in metabolism and vital processes, in the countless neural connections of the brain. His senses had sharpened and multiplied. Forces, radiations, the electromagnetic spectrum — creations of patchwork inference from the standpoint of Earthly science — had become for him matters of direct and intimate knowledge.

Only in the last few days had he begun to hear the voices of Earth.

He floated to the doorless port and looked out into the starry gulf — no longer terrifying now, but a challenge, a sea of unguessable shores.

The world he had left behind him hung there as before, an immense half-moon, blue-green and mottled, blotting out a whole sector of the diamond-and-black sky. As spatial distances go it was near — so near, indeed, that he could reach out and touch it with his mind. The voices were always there at the back of his head, to be listened to if he willed — a

tremendous medley rising unendingly from the darkening and lightening hemispheres, from the murky bottom of the sea of air. Voices of joy and grief, of beauty and evil; abysmal choruses of hatred and fear, bright notes of courage and compassion. . . .

Soon he would be going and would hear the voices of Earth no longer. Where, he did not know yet; perhaps Sunward, to look unblinded into the furnace where the secrets of matter lie naked; perhaps outward, past the orbits where Jupiter, ignoring the pebble-worlds of the Inner System, looks toward the Sun and calls it brother, where Saturn travels with its strange rings and many moons, to the frozen night of the utmost planets beyond which are only the stars. There were innumerable questions. Was Earth unique in the Universe, and the rest — the vast wheel of the Milky Way, the blazing abundance of the globular clusters, the crowding spiral galaxies with their billion billion stars — were these only waste matter, lifeless and dead, whirling away to the rim of space . . . or were there other breeding-places, other lives? Perhaps — the thought disturbed and allured him — there were others who had gone before him. . . .

But first he must provide for those who would come after.

His new sense was not yet sharp and selective enough to pick out and hold contact with individuals down there on Earth; the apparatus he had built was intended to remedy this shortcoming. He switched it on resolutely; he had no assurance that it would work, only the instinctive confidence that had guided all his actions for the past days.

With the instrument's aid he scanned an area on the rim of the night hemisphere, searching for familiar thought-patterns.

At the bench where he was working late over a new control device, Marty dropped a screwdriver and swore. His eyes peered hauntedly from under down-drawn brows, and he whispered, "Have I gone crazy, or *are* there ghosts?"

"Listen closely, Marty. I have two messages for you, and they're both important."

"But you're dead. The servos must have failed — but, damn it, they couldn't have! — and you're up there in a magnesium coffin going round the Earth for the rest of time. Dead . . . instead of me."

"Your servos didn't fail; I stopped them myself, in the first hours, when I still thought I was dying or going mad, when only my instincts realized what was happening to me. But I'm not coming back; I'm going on. Pay close attention, Marty. It's possible to improve the design of the nuclear power plant. I can explain it to you, and you can show other people, because you have the understanding of inanimate matter, the ability to project yourself into it, where I couldn't explain it in the language the

physicists use, because I don't know the symbols, the mathematics. But when I looked at the physicists' design out here in space, I saw the will to fail that they'd built into it, the fear they unconsciously had, I think, of going too far into the atom. If you take out the will to fail, the power output is increased about two thousand times. The ships can be built to climb at only one or two gravities and still have plenty of power, so that anybody — not just the exceptionally strong and healthy — can go out into space. Here's how you do it —"

What followed was pictures, kinesthetic impressions, whole operations, rather than verbalized thought. It took seconds only.

Marty rubbed the back of his head. "Might work," he said aloud in the empty laboratory. "On that business with the dampers, it might be easier to —"

"That's one message, the one you're to give them if you can make them listen. The other — perhaps you'd as well keep to yourself for the time being. It's this: the goal isn't what we thought it was, not the conquest of space as a road to the planets. The goal is the conquest of space itself! Space isn't empty or barren; it's flooded with energy, with the dust of old suns and the raw stuff of new matter. The planets are cold, dark, dying islands in a seething ocean that can be rich with life. Space is waiting!"

Marty stared before him, oblivious to the smell of burning insulation from the layout on his bench. Abruptly he burst out, "Hold on! Don't go yet. . . ."

Thousands of miles above him the being that Linden had become floated in the vacuum beside his queer apparatus, tuning it again with prehensile fingertips.

She sat bolt upright from sleep, crying, "*Jim!*" Her hands dug convulsively into her rumpled pillow. She sobbed, "Another dream . . ."

"You aren't dreaming. If later you wonder, talk to Marty; I've spoken with him. . . . Ruth, I love you."

"Where — where are you?" Her eyes strained fearfully into the darkness of the room.

"I'm beyond the Jumping Off Place, and I find it's only a new Jumping Off Place."

"Jim, come back! I don't care if . . . Oh, what's the use? It's too late, now that you're dead."

The voice in her mind seemed to chuckle softly. "I'm very much alive, Ruth. But . . . I'm afraid I can't return to Earth. Space has changed me."

She shivered. "Changed . . .?"

"I've grown up, darling, as you will if you follow me. For a long time the biologists have been telling us that man is a fetal throwback, a sort of

embryo that grows old without ever truly maturing. Now I've found out why: the conditions of maturity, the destiny that we are created for, don't exist on Earth. . . .

"But as I am now, I might be smothered down there under Earth's thick atmosphere; or human beings, seeing me, might tear me to pieces as something not human. Even you . . . might recoil from me." In her mind a picture formed, photographically clear.

She was very still for a moment, breathing rapidly; then she smiled tremulously and stretched out open arms in a gesture that needed no words or thoughts.

"Beloved!" The voice out of space was a silent shout of exultation. "Come out to me! In a year, two years, there'll be new ships, far better than any before — I've seen to that. Then you'll join me. Don't worry about how we'll find one another — when you come, when you grow up, too, you'll understand. We'll meet beyond the Moon, and all the stars of space will be around us. Our children will have suns for playthings —"

His voice faded briefly and grew hurried. "The Earth's curvature is coming between us, but it won't be for long. If you can't come, if you won't, it's all the same — I'll find means of reentering the atmosphere, and take you with me."

"I'm coming!" she cried.

The ghost-touch of a kiss brushed over her lips. Then silence. The girl sat motionless, staring into the darkness and beginning to believe.

More Facts About Robots

When robots take a walk
Around the town together,
They sometimes stop and talk,
But not about the weather.

Yet they have much to say
And murmur, without tiring,
Of switches, grids, relay
Or printed-circuit wiring.

LEONARD WOLF

Here is a very attractive little tale about a very attractive little man, conscientious Mr. George C. Burdy of the United States Post Office. Mr. Burdy was a true servant of the people and despite the fact that one day his mail route led him some 7000 years into the future (and into the eager arms of a very pretty girl) he remained faithful to his trust.

The Fresh Start

by ROGER DEE

NO ONE in Primrose City — himself least of all, by the nature of such things — expected George C. Burdy to disappear suddenly from his mail route at 2 o'clock sharp on the afternoon of the first Saturday in May. The vanishment was entirely accidental; certainly Mr. Burdy would never have disappeared by choice under such difficult circumstances, since he happened at the time to be a full hour short of completing his last delivery of the week and had in his leather mail bag 127 first-class letters and a copy of the current *World Almanac* addressed to Mrs. Higbee, the Fifth Ward weather observer.

At the moment of his — removal? — Mr. Burdy was 39 years old, an uncompromising and uncompromised bachelor with eighteen unblemished years of service in the Post Office Department to his credit. Include in the record, if you like, his three years of military duty during World War II; they were spent with an Army Postal Unit in Miami, Florida, and were equally unblemished. He was an upright and sober man, pursuing his way along the moderate groove of his life with a single-minded attention to his own business that had earned for him at the time of his disappearance a savings account balance of \$4700 and a neat little house near the corner of 5th and Elm Streets, where he cooked his own meals and raised pedigreed dahlias that took ribbons at the county flower shows with satisfying regularity.

The point is that Mr. Burdy was not the kind of man who disappears, suddenly or otherwise. Summing him up tolerantly, he was the sort to know his PL&R (Postal Laws and Regulations; not, as the uninitiated might suppose, another cryptic railroad titling like the AT&SF or the L&N) by heart; he was addressed as "Mister" Burdy by everyone but his post-

master and his superintendent of mails, and no one ever called him "George" or "G. C." Mr. Burdy was a footing if not a pillar of society, and his Great Aim in life was to continue being such.

But he *did* disappear, wearing a regulation uniform of Confederate Gray (his own property, not that it matters) and carrying a leather mail bag and brass keys-and-chain which belonged to the Post Office Department. The 127 letters went with the bag, along with the *World Almanac* addressed to Mrs. Higbee, the weather observer.

There was nothing spectacular about the manner of his going. No fissure yawned in the earth and swallowed him, no sinister black sedan purred alongside and spirited him away. There was only a brief haziness above the sidewalk at the corner of 5th and Elm Streets, a shimmering that was rather like the twisty dancing of heat waves on a sun-warmed roof, into which Mr. Burdy stepped and disappeared.

His vanishment caused some concern and a great deal of speculation among his patrons and neighbors, but nothing to compare with the furor that followed his reappearance exactly one week later, when he stepped out of a similar haziness and took up precisely where he had left off.

Mr. Burdy completed his interrupted round, turned in his bag and keys to a stupefied clerk-in-charge at the post office, and went directly home. His absence had been entirely unintentional, he explained carefully to his postmaster and superintendent of mails when they descended upon him at 5:15 that afternoon for an accounting, and every piece of his mail had been delivered safely, if a week late.

With one exception. Mrs. Higbee's *World Almanac*, he confessed, had been lost beyond recovery at a point some 7000 years in the future.

His postmaster and superintendent of mails sat on Mr. Burdy's sofa and looked at him for a time in the sort of stony silence you would expect to follow such a statement.

"Seven thousand years!" said Mr. Turnbull, the Primrose City postmaster. Mr. Turnbull was a large, pale man with scholarly pince-nez and very little hair, appointed to office by reason of his political affiliations and inclined to pass on the knottier problems of management-employee relationship to Mr. Crowley, his superintendent of mails. "What nonsense is this, Burdy?"

"Or what insanity," seconded Mr. Crowley, who was small and acidulous and something of an authority, after 33 years of experience, on the resolution of knotty problems. He was a bachelor like Mr. Burdy, but not for the same reasons: Mr. Burdy was a conservative idealist who felt himself unequal to society, whereas Mr. Crowley was a misanthrope who despised it.

"I could give you the whole story," Mr. Burdy said, looking at his watch and pocketing it again, "but you wouldn't believe a word of it. So there's not much use going into it, is there?"

Mr. Turnbull and Mr. Crowley were of a different mind.

"The truth, Burdy," Mr. Turnbull said, "never hurt anybody. I advise you to make a clean breast of whatever affair you've been involved in, since the Departmental charges that may be preferred against you —"

"Deviation from assigned schedule," Mr. Crowley ticked them off, briskly and with some relish. "Dereliction of duty, unauthorized removal and illegal disposition of mail matter under trust. Conduct punishable by suspension of service or by demotion in salary grade, or both."

"I wasn't worrying about *that*," said Mr. Burdy, surprisingly. "I'm only sorry about the delay, and about Mrs. Higbee's *Almanac*. Do you suppose she'd be satisfied if I bought her another?"

Mr. Turnbull, who was not accustomed to interruption from the rank and file, polished his pince-nez with his lapel handkerchief and pursued the inquisition.

"Mr. Crowley and I will arrange for proper restitution," he said. "Suppose you confine your remarks, Burdy, to telling us exactly what happened."

Mr. Burdy looked at his watch again and sighed. "All right. I guess you've got the right to hear it."

He settled himself in his chair and closed his eyes, looking reminiscent and faintly un-Burdylike. "I had just tapped my relay-box, a block from here at the corner of 5th and Elm," he said, "and was starting out on the last leg of my round —"

It had happened as suddenly as that. At one moment Mr. Burdy was proceeding at the prescribed average pace away from the intersection of 5th and Elm Streets, sorting his mail and wondering in an off-duty corner of his mind if he should lime his dahlia beds again this year. The next moment, he was *there*.

He had no idea at all as to where *there* was at first, of course. He had some difficulty later in believing the truth, even after they had explained it to him.

("They?" Mr. Turnbull interrupted. "The people who lived there," Mr. Burdy explained. "The people who were *people*, that is, though the others were people too, in their way. They — but I'll get to that later.")

There is little point in detailing Mr. Burdy's reactions to the transference, since anyone with imagination enough to have joined him vicariously in such a leap through time will supply his own in simple empathy.

Let us say that Mr. Burdy was astonished, which understates the truth but suffices the need.

His surroundings were quite pleasant, once he accepted the fact that he was no longer at the corner of 5th and Elm Streets. The air was very clear and fresh, without a trace of dust or haze; the horizon sloped upward in every direction like gently rolling golf links, its greenness sprinkled generously with dandelions and flocks of capering white goats. A scattering of white buildings nestled among the higher slopes, looking something like pavilions and something like beehives, but there was no sign of human activity. No airplanes droned overhead, no cities smoked in the distance. There were no highways or railroads in sight, no traffic or sound of traffic.

A small, clear stream wound its way out of the hills and purred past Mr. Burdy's feet, emptying into a little blue lake in the near distance. Trees surrounded the lake, most of them laden with sleek unfamiliar fruits in various stages of ripeness. The sun hung round and golden above the treetops, making the afternoon quite warm — so warm, in fact, that Mr. Burdy immediately found his uniform of Confederate Gray not only stuffy but downright oppressive.

Accordingly, being first of all a logical man, he put down his leather mail bag with its 127 letters and Mrs. Higbee's *World Almanac* and slipped off the jacket. There was at this point no disturbing doubt of his sanity gnawing at Mr. Burdy's composure; he was mildly alarmed, of course, but the possibility that he had gone suddenly mad did not occur to him until later. His main concern at the moment was what he should do with the jacket he had just taken off.

He was folding it neatly into his mail bag for safe keeping when someone giggled behind him, a clear soprano sound as musical and unaffected as the tinkling of the brook at his feet. Mr. Burdy turned, did what is commonly termed a double take, and closed his eyes in horror.

The stratagem did him no good. When he opened his eyes again the young woman was still there, but closer. She was of a height with Mr. Burdy's own five-feet-eight, with flowing red-gold hair that rippled in glorious unrestraint to her knees, and she was as beautifully bare and suntanned as a dryad.

("Burdy!" Mr. Turnbull said in a scandalized voice, so sharply that his superintendent of mails jumped and looked faintly guilty. "He's stark crazy, of course," Mr. Crowley agreed. "But his madness interests me strangely . . . Go on, Burdy." Mr. Burdy opened his eyes long enough to look at his watch, and went on.)

The girl had not stood on ceremony. She did not, it developed later, know what the word meant.

"You look just as I *prinned* you'd look," she said brightly. "But much pinker about the face." She walked around Mr. Burdy twice, patently fascinated by the fit of his clothing, and knelt to peep curiously into his grounded mail bag.

It was then that Mr. Burdy made the demoralizing discovery that the nubile nymph could read his every thought as clearly as if he had shouted it aloud.

"Oh, I'm Maiia," she said. "I live here, except when we go South for the winter . . . Why mustn't I touch Government Property, George? And what does *embarrassed* mean?"

Mr. Burdy, who had at last begun to suspect his sanity, tried to explain and succeeded not at all. Maiia failed as completely to grasp the concepts of property rights and of maidenly modesty as Mr. Burdy failed to understand how one *prinned*.

"It's really very easy," Maiia said. "Everyone *prinns* — especially Pordak, when he's not too busy with his thinking. It's something like hearing a friend talking around a corner — you know he's going to be there, even before you see him. That's how I knew you'd be here today, because I *prinned* it yesterday when I was swimming in the lake."

Mr. Burdy grasped eagerly at the inference.

"If you knew I'd *be* here," he said, "then you must know how I *got* here. What happened, and where am I?"

Maiia's explanation made it almost simple.

Something unforeseen, it seemed, had gone wrong with the electronic insides of the local power plant, which was housed in one of the white buildings up among the dandelions and the goats. There had been a sort of fourth dimensional short circuit — Maiia was briskly unconcerned with details — that created a rift in the space-time continuum; Mr. Burdy, caught up in the business end of a temporal vortex 7000 years long, had been snatched from here to there like a dust mote into a vacuum cleaner.

To understate the truth again, Mr. Burdy was appalled. Duty called him with clarion insistence, conjuring up fearful visions of patrons and neighbors waiting restively for their mail.

"But I hadn't finished my round!" he protested. "I've got to get back to the corner of 5th and Elm and —"

The full gravity of his predicament struck him speechless when it occurred to him that 5th and Elm streets no longer existed, that the intended receivers of his 127 letters were all dead and gone to dust along with their descendants some hundreds of generations removed.

"No, they're still there," Maiia said, reading his dismay. "Just as we're *here*, and as our grandchildren are already in the future ahead. It's simple."

Mr. Burdy understood nothing, but he sensed a thread of hope running through her prattle. "Then if my time is still there, can I get back to it?"

She looked doubtful. "We'll have to ask Pordak about that. But it's much nicer here than there, from what I've seen of your thoughts — are you sure you want to go back?"

("You did, of course," Mr. Crowley said acidly, "else you wouldn't be here now. Why?" Mr. Turnbull, who had been eyeing Mr. Burdy with growing uneasiness, said nothing. "I had no choice," Mr. Burdy said, a little stiffly. "With 127 pieces of United States mail in my bag, what else could I do?")

Since it was too late to see Pordak that day, Maiia took Mr. Burdy instead to her people, who lived in the white stone buildings overlooking the lake. Some of these latter-day people were a little older than others, a little taller or shorter, but the variance was small; they looked enough alike to have been poured from the same mold, and they were as carefree and uninhibited as the innumerable goats that trooped in and out at will.

They welcomed Mr. Burdy, mail bag and all, with open arms.

"You really should have told us about *prinning* the short circuit," Maiia's father reproached her mildly. "Pordak could have prevented that, and George would have been spared an unsettling experience. Now we'll have to disturb Pordak at his thinking."

"We'd have had to disturb him anyway," Maiia pointed out. "And don't worry about George. He's mine — my responsibility, I mean."

They plied Mr. Burdy generously with fruits and a surprisingly potent latter-day wine. They entertained him with singing and with a willowy sort of mimetic dancing until darkness fell, when they put him dizzily to bed — mail bag and all — in a small building that stood a little apart and looked, with its delicate mosaic work and its pendentive vaulting, something like a Byzantine chapel.

The next morning they took him to see Pordak.

Pordak's place was situated atop the nearest hill, dominating a cluster of lesser buildings that housed the local power plant, a miniature workshop and several of the sleek, saucer-shaped aircraft used in winter migrations to the South. Maiia's delegation pushed through the inevitable swarm of pensively bleating goats and went directly into the sanctum. They found the seer at his desk, peering myopically through thick hexagonal spectacles at a metal-leaved affair that might or might not have been a book.

Mr. Burdy's introduction to Pordak was undoubtedly the greatest shock of his life.

He had expected to find another human being, perhaps older and more

responsible than the others of Maiia's people but not essentially different. Certainly it had not occurred to him that Pordak would prove to be a mailed monstrosity roughly the size of a warthog, covered from pointed snout to pointed tail with transverse bands of horny armor and moving about (when he bothered to move at all) on four short, taloned legs.

It was nearly as disconcerting to find that Pordak, in spite of his frightful presence, was the gentlest and most accommodating creature imaginable.

("I've heard enough," Mr. Turnbull said decisively. "This is obviously a case for a Postal Inspector, Mr. Crowley, or for a psychiatrist." Mr. Crowley, who had begun to look surprisingly thoughtful, ignored him. "You make this creature sound exactly like our Southwestern armadillo, Burdy," he said. "Why?" Mr. Burdy checked his watch again before answering, "Because Pordak *was* an armadillo.")

Fortunately for Mr. Burdy, Pordak read minds as effortlessly as Maiia's people; as a matter of fact, it developed later that it was Pordak's people who taught the latter-day men the related arts of telepathy and *prinning*. Hence Pordak was able to assess the situation at a mental glance, and to reassure Mr. Burdy without imposing further strain upon his already creaking sanity.

"Relax, George," Pordak said in effect. "I'll get you back to the corner of 5th and Elm, but there's no rush. Let's talk about things first."

The discussion that followed made it more than ever apparent to Mr. Burdy that something, somewhere along the line of man's dubious ascent, had gone drastically wrong. He was ready enough to admit that Maiia's people had arrived at a utopia of sorts, but the manner of their arrival did not fit at all into the scheme of progress as he had known it.

Heading the list of discrepancies, naturally, was the matter of finding erudite armadillos in command of the brave new world.

He was disabused on the spot of his suspicion that Pordak's kind held that command by force. To his human community Pordak was a sort of combination father confessor, oracle and general factotum, his most practical functions being to select dates for winter migrations and to keep in repair the power plant and the hangared aircraft. Between such duties Pordak simply *was*, and the people took him or let him alone as they chose — unless he happened to be thinking, that is, when they avoided him religiously or risked arousing his mild talent for exasperation.

That vestigial irritability of Pordak's expressed neatly the principle which had put his kind at the head of Maiia's society; the latter-day men had evolved by careful intent to a serenity beyond any capacity for anger or resentment, and as a logical result found themselves incapable of rousing those emotions in others. A thwarted Pordak must of necessity be an

unhappy one, and in this utopian day it was unthinkable that any creature — man, goat or armadillo — should be unhappy.

Mr. Burdy, a conservative idealist himself, found the system improbable but wholly admirable.

He learned a great deal more by the simple expedient of wondering about it. The human population of earth, according to Pordak, was held carefully to some two millions; the day of cities was long past, leaving perhaps a dozen small decentralized settlements where those with the creative urge painted or made music or wrote books that might, or might not, be read. No trace was left of the society Mr. Burdy had known, nor any record of it — Maiia and her people, and Pordak with them, had no conception at all of war or industrialism or of political ideologies. Yesterday's 7000 years, Mr. Burdy found, had wiped the historical slate clean with a vengeance.

In his thirst for information it is entirely possible that Mr. Burdy gave more than he received, a circumstance for which Mrs. Higbee's *World Almanac* was largely responsible. He was tracing the development of the atomic bomb for Pordak, for example, when he stumbled upon the solution to the (debatable) fall of man and the rise to power of Pordak's kind. Men had literally blown themselves out of control with their atomic toys, and in the process had given their inheritors an unintentional leg up.

The inference, even to a layman like Mr. Burdy, was too plain to miss — those early test blasts near Alamagordo had exposed the armadillos of the desert to hard radiations which altered their heredity and passed on to future generations of mutated diggers the intelligence that was to make them rulers of the earth.

("Rooted out by armadillos!" Mr. Crowley said with a misanthrope's satisfaction. "I knew those atom bombs would be the death of us!" Mr. Turnbull, who had begun to perspire lightly at the talk of atom bombs, said nothing. "But they weren't," Mr. Burdy said. "They really gave men their chance to make a fresh start, don't you see?")

That first conference with Pordak lasted longer than Mr. Burdy realized, so long that it was nearly dark when he disengaged himself and trooped with Maiia and her people down the green hillside to the lake. Mrs. Higbee's *World Almanac* he left on loan to his host, who read it through at a sitting and shook his carapaced head at the inanities of pre-Pordakian humanity.

The evening brought two developments that changed the whole tenor of Mr. Burdy's stay in the future.

First, though he still lacked the courage to go swimming *au naturel*, Mr. Burdy found it increasingly pleasant to sit on the beach with his mail bag beside him and watch his uninhibited latter-day friends disporting

themselves in the water. He had forgotten for the moment their trick of communal mind reading, and had arrived privately to the opinion that Maiia was probably the most attractive woman in this age — or any other, clothed or unclothed — when the swimmers startled him by applauding his decision in a body. Maiia, utter stranger to maidenly reserve, aggravated his embarrassment by calling with some satisfaction, "It's about *time* you thought so!"

The second development was less fortunate. Pordak dozing, at his desk, failed to wake when a pair of the ubiquitous latter-day goats wandered in. Seven thousand years may improve the morals of men and armadillos, but goats are made of sterner stuff; these two, bored by their monotonous chlorophyll diet, took advantage of Pordak's napping to vary it.

They ate Mrs. Higbee's *World Almanac* down to the binding, covers and all.

("But I'll reimburse Mrs. Higbee for the loss, of course," Mr. Burdy said. "So there's really no damage done." "Except to your service record," Mr. Turnbull said darkly. "Burdy, if you've made up this monstrous story only to justify the loss of one piece of book-rate mail matter —" Mr. Crowley interrupted him rudely: "Go on, Burdy! What happened then?")

It would be pleasant to relate that some crisis of earth-shaking imminence arose during Mr. Burdy's visit — an invasion, say, by tentacled alien monsters from Alpha Centauri — and that he quelled it with the nice blending of spring-steel courage and *savoir-faire* expected of fictional heroes. But the sober truth is that no emergency more desperate than a goat-eaten book marred his stay, and that his most enlightening discovery (made on the second evening with Maiia's assistance) was that his personal quarters with the Byzantine vaulting was not a chapel after all but a pavilion for honeymooners.

Also he forsook his uniform of Confederate Gray for the more conventional, and more comfortable, mode. By the time that Pordak had repaired the power plant, Mr. Burdy was in fact so much at ease in his surroundings that he was distinguishable from his latter-day friends only by his barbarous Twentieth Century haircut.

("That wasn't strictly from choice, though," Mr. Burdy said defensively, reddening a little under Mr. Turnbull's offended stare and Mr. Crowley's envious one. "My uniform would have been positively filthy by the end of the week. I couldn't come back to duty looking like a tramp, could I?")

Another man might have turned a deaf ear to the call of duty. A man of more elastic conscience might have shrugged off his obligation to return across a gulf of 7000 years to deliver a paltry 127 week-old letters, but not

Mr. Burdy. He remained steadfast to the end, though Maiia's pleadings shook him more than he dared admit.

The moment came when Mr. Burdy stood with Pordak in the power station, his black bow tie clipped on at the correct horizontal angle and his leather mail bag slung across one Confederate Gray shoulder. Maiia stood close by, smiling proudly through her tears and *prinning* desperately for a glimpse of his fate; her people filled the doors and windows, calling goodbyes and reassurances.

Pordak threw the switch, and Mr. Burdy stood again at the corner of 5th and Elm Streets.

The concrete was damp and gritty under his feet. It was raining a little on that second Saturday afternoon in May, and the thin wind that blew across Primrose City breathed a breath of coal smoke and gasoline fumes and leftover boiled cabbage. The world, compared to the green haven of bliss from which Mr. Burdy had just stepped, was a gray and cheerless place.

But Mr. Burdy knew his duty, and he executed it to the last week-old letter. Then he went home, like the hero he was, to face inquisition at the official hands of Mr. Turnbull, his postmaster, and of Mr. Crowley, his superintendent of mails.

"And now," Mr. Turnbull said, "if you've *quite* finished with your nonsense, Burdy, I'll offer you a sound bit of advice. Pending investigation of your absence, you are suspended from duty—I would suggest that you use the time to consult a good psychiatrist."

Mr. Burdy glanced at his watch and stood up hastily.

"That won't be necessary, sir," he said. "I'm leaving an envelope on the mantelpiece with money to pay for Mrs. Higbee's *World Almanac*, also a will making my savings and property over to the Primrose City Orphans' Home. And now, if you gentlemen will excuse me, I really must hurry."

Mr. Turnbull gaped and dropped his pince-nez. Mr. Crowley sprang up and caught Mr. Burdy's arm. "What do you mean, Burdy? Where are you going?"

"I'm going back, of course," Mr. Burdy said. "The world made a fresh start after the atomic wars. Why shouldn't I?"

He freed himself respectfully from his superior's clutch. "Pordak promised to open the time rift for me again at 5:45, and it's 5:42 already. Goodbye, and I hope the atomic wars don't come in your lifetimes."

Mr. Burdy was halfway down the block when Mr. Crowley, leaving Mr. Turnbull dazedly polishing his pince-nez with his lapel handkerchief,

made up his mind. He rushed out after Mr. Burdy, waving his arms and crying: "You can't *do* this, Burdy! Wait for *me*!"

But Mr. Burdy reached the corner first and disappeared into a haziness that was, so Mr. Crowley swore later, exactly like the twisty dancing of heat waves on a sun-warmed roof. Mr. Turnbull scouted the whole story, of course, declaring that Mr. Burdy in his madness obviously had leaped into a passing automobile and so had escaped the city. But Mr. Crowley was convinced otherwise, as his subsequent actions proved.

Mr. Crowley has retired from his position as superintendent of mails at the Primrose City post office. He has bought Mr. Burdy's little house, we are told, and spends most of his waking hours walking up and down, foul weather notwithstanding, at the intersection of 5th and Elm Streets.

Cowboy Lament

I'm sellin' my chaps and my six-gun,
My saddle, my spurs, and old Paint;
I onct was the toast of the juvenile host,
But today it's apparent I ain't.
By flyin' machines I've been ruint;
My fans have averted their face:
They're goin' for varmints in rubberized garments
Who soar to the borders of space.

My radio option's expired;
I'm poison to films and TV.
Oh, bury me not on a two-minute spot
Where there ain't any glory for me!
Hey, mister! I'll buy me a space-suit
And trade my cayuse for a jet:
If others can blast off, I ain't any castoff —
I'll win back my audience yet!

NORMAN R. JAFFRAY

Recommended Reading

by THE EDITORS

ALTHOUGH THIS department is addressed to adult readers, we do feel it's a good idea to include, from time to time, a few notes on juvenile science fiction. You may want to know how to rear your young along the proper orbits; you may want advice on Christmas presents for children; or you may, occasionally, find better reading for yourself among the juveniles than in much nominally adult s. f.

But several things worry us about most science-juveniles published. We can see a purpose in publishing special books for, say, the 8-12 level (of which very few have been done); but so many teen-agers read adult science fiction — as probably you did in your own teens; certainly we did — that we can't see terribly much point in proffering a sort of written-down pap for the 14-18 group. If you're giving presents on this level, you'd probably do better with a judicious choice of adult anthologies and adventure novels, and accustom the teen-agers to a better quality of writing and of scientific thinking than they're apt to find in the books written especially for them.

It's particularly exasperating that these juveniles, which should be educational if nothing else, contain such bumper crops of scientific boners. Obviously neither their authors nor their editors have the patience (or the integrity) to sit down for five minutes with a common reference book and check planetary distances and gravities, or enough elementary arithmetic to figure out the duration of a journey of so many miles at so many m.p.h. You can imagine what happens with more abstruse problems of astronautics. . . .

None of these strictures, of course, apply to the work of Robert A. Heinlein. Mr. Heinlein practically created the science fiction juvenile, and created it on a level which makes most adult s. f. books look pretty childish. We've said often before that each fall's Heinlein juvenile is automatically one of the best books of the year for any age; and we're inclined to think that *STARMAN JONES* (Scribner's, \$2.50) may be his best yet. It differs from the others in having an older hero (in his early twenties) and in embarking, for the first time in the series, on interstellar, rather than interplanetary, adventure, with a beautifully worked out system of charted "congruencies" in folded space which is, physically and mathematically, the most plausible method we have yet encountered of passing what Heinlein

calls the Einstein Wall holding us below the speed of light. Good character-development, rousing adventure-telling and brilliant creation of several forms of extra-Terrestrial life place the book on the most urgent *must-list*.

For younger readers — and for yourself — we recommend Walter R. Brooks' *FREDDY AND THE SPACE SHIP* (Knopf, \$3). If you have children, you already know Freddy, the incomparable pig who is detective, banker, newsman, politician — and now astronaut. There's really very little science fiction in this story (and what there is suffers somewhat from the flaws mentioned above); but as pure fantasy, it offers wit, sound structural plotting, genuine character-humor, and admirable English prose — all qualities markedly lacking in most of the juvenile crop. We might add that no review copy has ever been seized so avidly by our boys.

We have five other s. f. juveniles on hand, but the general remarks above cover them adequately, and we can move on to adult novels. Two of these are little more inspiring than the unmentioned juveniles: Sam Merwin Jr.'s *THE WHITE WIDOWS* (Doubleday, \$2.95) is simply one more rewrite of the paranoid theme that all humanity's woes are caused by a batch of sinister secret agents — in this case Amazons, trying to achieve parthenogenesis and meanwhile weakening the still indispensable male sex through hemophilia. As F&SF readers know, Mr. Merwin can do better than this. David Karp's *ONE* (Vanguard, \$3.50) has received much extravagant critical praise; one major review went so far as to say, "Compared to it, most of the Utopian writing of this century (. . . except only George Orwell) is mere science fiction." Personally, we'll stick with the merest of science fiction rather than this long and tedious repetition of a tired topic (the individual *vs.* the State) which, for all its literary pretensions, neglects such literary essentials as consistency of background and motivation of characters.

Others who share our taste will have a merely wonderful time with C. M. Kornbluth's *THE SYNDIC* (Doubleday, \$2.75), a short novel of what the world might be if people grew so sick of unreasoning governmental restrictions that they turned to an anarchy ruled by organized crime (and if the notion seems fantastic, remember Prohibition). Here is first-rate speculative melodrama, logically extrapolated from its premise and excitingly plotted with events that could happen in no other society — in all, reminiscent of such fine early Heinlein as *BEYOND THIS HORIZON*. And Mr. Kornbluth's first hardcover novel, 1952's fine spy-story of the first moon-flight, *TAKEOFF*, is now available in a paper reprint (Pennant, 25¢).

And so we come to anthologies. . . . There are three this month, containing among them 36 reprinted stories, totaling over a quarter of a million words. As Mr. Heinlein observed titularly, *IF THIS GOES ON* . . .

Best of the lot, not at all surprisingly, is *THE BEST SCIENCE-FICTION*

STORIES: 1953, edited by Everett F. Bleiler and T. E. Dikty (Fell, \$3.50), which starts off with an erratic foreword by Alfred Bester on what is wrong with s. f. (much though we love Mr. B. as a writer, we know few critics who are faster on the draw with wild generalizations), and goes on, through fifteen stories, to do a good job of showing what's right with it. We think, as objectively as possible, that it's not mere pride of discovery which causes us to rank as best among the BEST Zenna Henderson's touchingly human novelet, *Ararat* (F&SF, October, 1952); but it gets stiff competition from two extraordinary *Galaxy* stories, a deeply emotional post-atomic drama by Fritz Leiber and an interplanetary horror-tale by Richard Matheson — and most of the other stories, with the exception of one tasteless piece of sheer bad writing by Mark Clifton, come close to this standard.

THE BEST FROM STARTLING STORIES (Holt, \$3.95) is mostly from *Thrilling Wonder*, which is a little confusing, and is not quite the best from either magazine, which is more understandable — inevitably, previous anthologists have skimmed off a good deal of the cream. But editor Samuel Mines has assembled eleven hitherto unreprinted stories, of which a surprisingly large number (including especially a down-to-earth piece of sharp realism from ex-cataclysmatist Edmond Hamilton and a fine Bradbury Mars story not in THE MARTIAN CHRONICLES) can rank among the best from any source. And most wisely, he has added an introduction by Robert A. Heinlein (fourth mention of Heinlein in this column! — but how can a science fiction reviewer avoid such repetition?) containing some of the most quietly sensible remarks on the entertainment value of science-fantasy that we have yet read.

William Sloane has achieved in the science fiction field some truly distinguished writing (TO WALK THE NIGHT) and editing (Ward Moore's GREENER THAN YOU THINK); but his first anthology is a disappointment. It is called SPACE SPACE SPACE (Watts, \$2.50) because it is part of (honest!) the Terrific Triple Title Series. Of its ten stories, Eric Frank Russell's *Dear Devil* (possibly the best of all Russells) has been reprinted earlier by Conklin — and takes up 20 per cent of the volume. Of the unreprinted stories, good entries by Arthur C. Clarke and Clifford Simak seem lost in a mass of drab recent rewrites of story-ideas that were pretty startling ten or fifteen years ago.

We knew nothing about Desmond Leslie and George Adamski, but we do think they possess a certain kind of genius. In FLYING SAUCERS HAVE LANDED (British Book Centre, \$3.50), they have produced what is unquestionably the worst authenticated, least scientific and in general silliest book on "saucers" yet published — no small accomplishment in view of the competition.

Powell Jenkins, Jr., is a young man whose vocation is chemical research for Navy rocket developments and whose avocations include mountain-climbing and the writing of feature articles on science and travel. This story is his first fiction; and it's as gratifying as it is surprising that a man with such a solidly realistic background should produce so delicate and sensitive a fantasy.

The Mouse With the Twisted Foot

by POWELL JENKINS, JR.

ON A COOL evening in autumn, before the harsh chill of winter had penetrated the wooden sides of the old house, Everard took leave of his brothers and sisters and cousins and nieces and, lest his courage should fade, ran swiftly along a pipe to a worn hole the size of a half dollar and vanished.

With his heart pounding, but without a glance back, he began climbing the rough wooden joist to the next floor. He passed a comfortable two-by-four platform and continued upward until he was at the topmost floor and he knew that the others below were spreading throughout the creaking house in their nightly foraging.

It was his privilege as the eldest to hunt in the most dangerous area. That privilege had moved down the family in quick succession since the peddler had occupied the top floor.

He listened to the heavy footsteps as the man walked from one side of the room to the other. Everard climbed, making sure his claws did not scratch the wood too loudly, until he could see through a crack in the baseboard. The man walked to his worktable and stood meditatively fingering several small mechanisms. He picked one up and snapped a spring-loaded lever back and forth, then forced it back until it clicked. With his pocket knife he cut off a piece of cheese and cautiously inserted it into the mechanism. Then he very carefully placed the contraption on the floor near a hole in the baseboard.

Everard waited until the light was out and a gentle sound of snoring filled the room before he poked his bright eyes and white whiskers out of the hole.

He edged by the trap and in two tremendous leaps went from the floor to the chair to the tabletop. Passing uneasily among the frightening variety of ingenious traps in various stages of manufacture, he made his way to the

tin box where the peddler stored his own lunch. The lid was not fastened and a gentle nudge opened it enough for a very small mouse to pass through.

He ate leisurely and finished only a little before dawn. He became somewhat condescending toward the fate which had reached out for his elders — perhaps a little too much so, for in emerging from the tin lunch box he climbed across the lid and it swung shut with a single subdued thud. Everard froze in terror, but no sound rose to answer his accident and after a few moments he ran softly to the edge of the table.

He was bracing himself for the leap when, in a final glance around the room, his eye caught the open, fiercely staring eye of the man in bed.

Everard came from a race in which, for thousands of generations, only the quickest, fleetest, and most intelligent had survived. Although he was lousy from his meal, his decision was instantaneous and his leap was mighty. Concealment abandoned, he dashed for his hole, his white feet merely a blur.

He traveled fifteen feet before a brawny arm could snatch a shoe. He skidded slightly on the turn as the shoe swung high, and dove for the hole as the shoe flew through the air, its laces whistling.

The shoe slammed across the hole with a terrible bang so close that Everard swerved inside and tumbled dangerously near the deep drop between walls.

The next evening Everard came back.

His return was not flippant nor yet a gesture of bravado. He had inherited the most dangerous area and he would stick with it. He had also inherited some other things — things that a very old uncle had told him — strange lore that he had never thought of before, but which had commenced to rise within him as though the thrown shoe had pulsed a signal.

Stories, too, welled into his consciousness. He seemed to remember the peddler in a hundred different dresses and a hundred different climates, every time with his ingenious traps — traps which caught but did not always kill — fiendish traps built for the amusement of the dark-faced peddler.

Everard rubbed his face vigorously to brush off the webby feeling of historical struggle and stepped alertly through the hole in the baseboard.

This time no trap had been put near his hole. The two antagonists had already correctly gauged each other's resources, and future contest would take place on a more intense level.

Warily, Everard climbed to the littered top of the workbench. He found the lid to the lunch box ajar again and suspiciously kept clear. Circling, he caught the scent of freshly baked bread and followed it across the moonlit floor to a flimsy cupboard. He went behind the cupboard and quietly set to work on a back panel. Coming in at the bottom in a few minutes, he discovered a heavy, solid shelf still separating him from his supper.

He emerged, climbed up the back, and once more cut his way in. This time he came upon the bread. A good portion of the night passed without disturbance; but after a far-off clock had struck 3, the light abruptly came on and heavy feet trod the floor. Everard went to the hole he had made, but could see nothing except the blank wall behind the cupboard. For several minutes a sound of tinkering came from the workbench, then the steps crossed the room again and the light went out.

He listened a long time for the characteristic breathing of the man asleep. Gradually, he became aware that the peddler was also very still, listening and waiting.

Everard considered trying to remain concealed where he was, but realized that when daylight came, the peddler would thresh about the room to find him. Laboriously, he climbed down the back panel. Each claw hold had to be carefully gained to avoid noise or slipping. From the edge of the cupboard he could see the man sitting on the bed, a short club in his hand and his eyes straining at the plaid of moonlight stretching across the floor.

Realizing that he could avoid crossing the moonlight, Everard climbed once more to the workbench top and started past the tin lunch box. Suddenly, he saw his own footprints before him. A light-colored powder scattered about the box had recorded his cautious circuit around it. He saw, too, that the box had now been opened and there, apparently just removed from the box, was the trap he had suspected. He quietly entered the box and although he was not now hungry, he sampled everything within, leaving tooth marks as plain as possible.

Coming out, he went to the edge of the table and dropped softly to the chair, then to the floor, having circumnavigated the treacherous moonlit area. He walked quietly to the hole in the baseboard, turning only once to stare at the peddler's eyes, blazing unseeing in the dark.

Everard crept behind the baseboard and along to a quiet, dark den where the subflooring met the main framing of the old house. He curled up and slept, unassailable by the hand of man or the light of day.

Secure as he was, however, he was roused with a confused jump when the early dawn lighted the peddler's room; for that dark gentleman saw how he had been tricked and his anger overwhelmed his senses so that he shouted and stamped and cursed and banged the walls. He called down every species of curse on the mouse and kicked to pieces his own carefully worked traps. He fairly leapt into the air with his rage and came down on the floor with a thud that made Everard tremble. Then, abruptly, he snatched on his hat and coat and went out, still mouthing curses without end.

The stamping and rhythmical trembling of the old house seemed inappropriately to suggest a tune, or rather the forgotten memory of a tune,

to Everard. Forgetful of the peddler's fearful rage, and with a puzzled air, he tried to think. The image of his old uncle sitting on his haunches rose from somewhere in his memory. He sat there, solemnly beating time to "*Oh! Mouse . . .*" How did it go? "*Oh! Mouse . . .*"

Everard could not remember, but the mental image was becoming more real. The old uncle sat there, almost as solid as the dark, rough timbers, beating time with . . . with his twisted foot! That was it!

*Oh! Mouse with twisted foot!
You dance in drifting soot.*

Everard tapped time and the unmelodious tune seemed to carry itself, leading its own faint existence in the antique air trapped in the house. His uncle faded, still tapping time, still with the solemn faraway gaze.

Everard sat for a long time with a puzzled air. The tune ran endlessly through him and through all the tiny corridors and passages of the house.

He began to suspect finally that if he thought long enough he would remember a verse as well as the refrain. Or, perhaps his uncle would help him.

The sudden bang and clatter of the returning peddler went unheeded.

When evening came, Everard was sitting absent-mindedly behind the baseboard, a few inches from his hole; tapping on the floor with his paw and thoughtfully staring at the wrong side of the plastered wall. *Tap tap tap.*

*Oh! Mouse with twisted foot,
You dance in drifting soot.
Around the maiming trap you've whirled;
Your twirling feet can damn the world.
Oh! Mouse with twisted foot!*

Tap tap tap. He walked to the hole. *Tap tap tap.* He put his head out. *Tap tap tap.*

The peddler sat on the edge of his bed, unlacing his boots in the gloom. He heard the faint tapping and looked up, swinging his lowered head back and forth until he faced toward the hole. Everard sat, invisible in the deep shadow, and tapped his hind foot. A quick intake of breath which might have been fear came from the figure on the bed.

Everard leapt to the chair, and then to the workbench, landing in the flickering light of a candle stuck on the bench. The man stared as he walked the length of the bench, absently tapping his foot as he went. He came to the end, turned around and went back toward the candle. Then he saw, sitting near the candle, the product of the peddler's afternoon of feverish work. It was a trap, and a more fiendish one had not been invented in any century. A narrow walk led from the table to a piece of cheese and around the walk and

cheese was heaped an inch high mound of gray, not-unpleasant-smelling powder. Its odor was of charcoal and saltpeter and sulfur. And beneath the cheese was a matchpiece which would spark if the cheese were lifted. The trap could not possibly kill, but . . .

The bed creaked slightly and Everard continued to study the trap. The vision of his uncle rose again, this time with a fierce scowl, but still marking time with his foot. The trap . . . the *maker* of a trap like this . . . Where is the thought? . . . does it come from his uncle? The *maker* of a trap like this . . .

A floorboard popped behind Everard. He sat still for an instant deliberating. Then, as a gnarled, brown hand rose above him from the dark, he jumped against the candle.

The feeble flame lit upon the gray powder and the entire room flashed with sudden brilliance. The hiss of burning powder mingled with the yell from the peddler. A cloud of black smoke went up and rolled against the ceiling.

Everard had landed not quite beyond the edge of the flash, and had tried to shield his face with his right paw. The intense heat and light had blinded, confused, and badly burned him. He rolled from the table and lay still on the floor.

*Oh! Mouse with twisted foot,
You dance in drifting soot.
Your oldest foe you've crossed again;
Now wear the crippling badge of pain.
Oh! Mouse with twisted foot!*

The peddler ran screaming to cram a scrap of wood in the baseboard hole. Then he fumbled and came up with a light. The smoke terrified him and he ran for the door, opened it — and remembered the mouse again.

Everard, roused but dizzy, and weaving an unsteady path, shot for the open door. The tune sprang up into a gay lilt and he found himself answering every beat in the most idiotic, terrified and altogether senseless way. Limping, struggling to keep going straight, he ran across the peddler's foot placed as a block in the closing door, across the hall landing, out into the space of the stairwell. *Tap tap tap.*

For a while he floated, turning slowly and gently in space; then with a sudden blotting out of the senses, he hit on the dusty hall sofa, far below his starting point.

The peddler searched for an hour in the dim hall. He got on his hands and knees and methodically went over the floor looking for the tiny body to

vent his rage upon. In the end he left and Everard, who had rolled beneath the edge of an old and stained cushion, rolled out again and tried to walk.

He could not. He could hop, but he could not touch his burned right paw to the floor. *Tap tap tap*. He hopped feebly, the tune solemn and dirgeful, but in perfect time. He wondered if he would ever learn another verse.

For a week he was sick and often delirious. Wherever he walked, he limped and wobbled, but gradually the burned paw healed and he could touch it to the floor. It was, however, left crooked and twisted, and his walk never progressed beyond an efficient running hop.

When his paw had healed, the image of his uncle appeared to him once more. He was stern and forbidding, but still tapping out the time to the senseless tune that seemed to permeate the whole universe. Everard sat respectfully until his uncle had gone, then descended to the deepest basement of the ancient house, finding a way to go lower than he had imagined could be done. After considerable searching in the dark he came to a hole between bricks and passed through, down a long corridor.

He came out onto a ledge in a large sewer and sat until once more his uncle appeared and vanished. Then he hopped precariously along the ledge until it joined another. He found it difficult to walk on the ledge for the tune made him dance and hop as he went along.

Everard traveled through a maze of black sewers and blacker connecting lines. Once he came face to face with a large and criminal rat, but he sat down and tapped his foot and the lilting tune ran up and down the sewer until the rat turned and fled.

Days and nights passed indistinguishable in the black sewers. He was weary, but the crazy tune that was almost a dance sped his feet along. *Tap tap tap*.

He came to dry ground at last by descending a series of brick and masonry tubes which led steeply down. A small, withered mouse sat waiting for him. Everard thought at first that it was his uncle again because this mouse, too, had a twisted foot, but it was obviously not his uncle.

The two, limping together in the same peculiar cadence, entered a low vault. In the center on a low rounded stone sat the oldest and most decrepit mouse Everard had ever imagined. He was sitting as his uncle had always sat, beating time to the senseless tune, the crazy lilt that filled the hollow vault.

He, too, had a twisted foot.

Everard stayed hours. He carefully followed directions and found that he could remain erect and yet dance in time with the tune which the old mouse beat out. It was a mad, strenuous, and passionate dance. He whirled and spun and waved his twisted foot. His lilting gyrations put down a curious set of patterns in the thick black dust.

*Oh! Mouse with twisted foot,
You dance in drifting soot.
The magic patterned rune you shape;
Its measured curse will bar escape.
Oh! Mouse with twisted foot!*

He left after his lessons were perfected and went back through the sewers to his basement and then once more up toward the top floor.

But he was unable merely to walk. The tune possessed him and he spun and danced the whole way. Along the narrowest of ledges he pirouetted in reckless circles. At the highest of drops he danced and spun and waved his twisted foot.

He spun and gyrated along behind the baseboard. Even the strong smell of cats went unheeded. He danced up to the hole, now waiting wide open, and stepped out.

The peddler was standing watching the hole. He went white and a trace of sweat appeared on his forehead. He strode to a large cage and he opened the door. Two tawny cats came out.

Everard spun out into the room while cats and man held their breath. He stopped, bowed to the peddler, then tapped his hind foot three times in careful measure and swung into his dance. The blur of his feet traced out their curious hieroglyph and his twisted foot waved in a frenzied balance. His spinnings and pirouettings carried him around and around on the floor.

*Oh! Mouse with twisted foot,
You dance in drifting soot.
To shrink the crippler now advance;
Destroy the damned one, bow and dancel
Oh! Mouse with twisted foot!*

The tune flowed and wove into the room. The furniture and the house itself seemed to rock and a faint cadence drifted from below. Something stirred and creaked and still the mouse spun insanely around and around, his feet beating out the weird pattern. A sound arose, a horrified choke in the throat of the peddler.

He had begun to shrink!

And still the mouse danced his endless, mad dance, heedless of anything.
To shrink the crippler . . . !

The dark peddler, in immovable dread, could now hardly see over the table. His wide staring eyes reflected the spinning ball of fur — the spinning ball which kept an insanely precarious balance with a twisted foot.

Spinning, spinning, spinning. Madder and faster. The peddler, inarticulate, was no higher than the seat of his chair. One cat shifted restlessly.

The dance swept everything into its tempo of swinging, impossible frenzy. It possessed the room, shook it, scattered its light into shadows and rattled its walls. Until at length it stopped.

Everard, dizzy, stopped and swayed. For a moment he gazed at the tiny figure, hardly larger than himself, which recovered and ran terrified across the vast floor. He heard a low snarl from a cat.

He slowly turned. *Tap tap tap.* He went back toward his hole wondering if he would ever learn another verse. *Tap tap tap.*

Coming . . . in our next issue (on the stands in early January) . . .

Two novelets — in response to your expressed desire for long, meaty stories — both by authors new to F&SF and sure to win a place among your steady favorites:

PLAYGROUND — William Morrison's offbeat, humorous adventure story of large-scale peril and small-scale domestic difficulties on an unknown planet;

SANCTUARY — a powerful suspense story, by Daniel F. Galouye, about the impact of the world's violence upon an involuntary telepath;

plus

the only published science fiction story by Isaac Asimov which has never before been presented to a science fiction audience;

and

a completely charming moral tale of science by one W. Norbert . . . who is the fiction writing alter ego of cyberneticist Norbert Wiener.

All this — in addition to original short stories by such front-rank science-fantasy writers as Poul Anderson, Esther Carlson, Peter Phillips and Mack Reynolds.

With this new year of 1954 we inaugurate a new policy in F&SF, one of giving you occasional articles. We plan to publish factual accounts that will give our readers a more complete understanding of controversial personalities of science or that will present to them in fresh perspective contemporary trends in scientific theory or technical research. You prospective contributors need fear no set formula; just be able to authenticate completely what you have to say and say it as stimulatingly and entertainingly as possible.

In our first article Miriam Allen deFord, a writer of note in such divergent fields as fantasy, fact crime and labor relations, publishes for the first time fascinating excerpts from the correspondence she and her late husband, Maynard Shipley, carried on with that joyous mocker at orthodoxy, Charles Fort. From his letters to the Shipleys, Fort emerges as a personality who would have sorely disappointed both his adulators and his detractors. He was not one of those lunatic gospels that Martin Gardner has so aptly dubbed "hermit scientists," hugging his crackpottery to his bosom; nor, as some would have it, was Fort the prophet of the new truth. Rather, he was a "snapper-up of unconsidered trifles," justifiably bitter and angry because, before his challenge, these proved to be neither trivial nor inconsiderable.

Charles Fort: Enfant Terrible of Science

by MIRIAM ALLEN DEFORD

ONE DAY in 1921, in a lending library in Oakland, California, I came across a book with an odd title, *The Book of the Damned*. I opened it and glanced through it cursorily; it was written in a strange style, half journalistic, half apocalyptic. Intrigued, I took it with me to my home across the Bay in Sausalito. My husband and I sat up all night, reading the book aloud to each other, unable to put it down.

That was my introduction to the works of Charles Fort.

"The damned" were the authenticated facts, reported by responsible persons, that were ignored by orthodox science because they didn't fit in.

Fort had been collecting such facts for years, and gradually weaving a theory of his own around them. Here were people who had burned to death with not even their clothing charred, unexplained disappearances followed by sudden appearances of equally unexplained animals in inappropriate places, airliners and dirigibles seen long before the days of flying, rains of flesh and artifacts, footprints where nothing could have stepped — dozens and dozens of utterly inexplicable phenomena, all checked and rechecked and verified.

These facts could not be denied by any open-minded readers. Fort's theories were something else again: they included such bizarre ideas as a stationary earth, near-by lands ("not planets"), life on *stars*. My husband, Maynard Shipley (Fort later described him in *New Lands* as "a writer and lecturer upon scientific subjects, if there be such subjects"), was about equally impressed by the mass of data and outraged by some of the rash conclusions drawn from them. He wrote to the author, in care of the publisher, and told him so. After a long time an answer came from London, where Charles Fort was gathering more "damned facts" in the British Museum. That was the beginning of a correspondence which lasted until Fort's death in 1932. We never met in person, but we became good friends on paper — which to a shy, introverted man like Fort was much more desirable, anyway, than any face-to-face encounters. In 1922 there was a celebrated series of stone-falls at Chico, California. I went there and investigated it for Fort, and myself saw a stone fall from some invisible point in the sky and land gently at my feet. The questions Fort asked me and the care he took in getting details straight taught me something of his obstinate search for verification — a search so intensive that for several years it cost him his sight.*

Except for a forgotten and long-out-of-print novel, *The Outcast Manufacturers*, published by Dodge in 1909, only four books appeared by Charles Fort, and the last of these was posthumous. *The Book of the Damned* was issued in 1919, *New Lands* in 1923, *Lo!* in 1931, and *Wild Talents* in 1932. (The first two were under the imprint of Boni & Liveright, the last two under that of Claude Kendall.) In 1941 the four books were reprinted in one volume, edited and introduced by Tiffany Thayer — and with an index, which the separate volumes sadly lacked.

I have never seen the novel, and have never read any of Charles Fort's

* My own first meeting with Miss deFord came about when I investigated a similar stone-fall case in Oakland, California, in 1943. We compared notes and found our experiences almost identical — save that in 1943 there was no Fort to whom to report the details; and as a result the Oakland case will be known to future researchers only in the misleading and sometimes outright mendacious reports of the daily press. — A. B.

short stories, by which he supported himself in the early years of this century; some of them were written for the *New Broadway Magazine* when Theodore Dreiser was its editor in 1906 and 1907. The novel's title is thoroughly Fortean, and may mean different things according to whether "outcast" be taken as a noun or an adjective.

Wild Talents, which Fort did not live to see in print, deals with witchcraft, magic, and poltergeist phenomena. The first three of the series might be called primarily astronomical — if Fort had "believed in" astronomy. The theme that binds them all together he expressed in *New Lands* as "the underlying oneness in all confusion." His other persistent theme (now a commonplace of science fiction, but 30 years ago startlingly new) he put specifically:

"I think we're property. I should say we belong to something . . . That something owns this earth — all others warned off."

To give even an inkling of Charles Fort's collection of impossible actualities, even to hint at their variety, let alone describe the guesses at relationships which he drew from them, would demand a book — did require four books, and would have required more if Fort had lived to write them. Like Christopher Wren, he could say: "If you ask for my monument, look about you" — into his books themselves.

Though great reputations and established systems scared him not at all, Charles Fort was the least dogmatic of men. The last thing he wanted was to set himself up as a dictator or a pundit. He knew very well that his function was to act as a gadfly on the hide of orthodox science, to sting it awake. In the letter he sent us with a presentation copy of *Lo!* he said: "Maybe it's awful. Maybe somebody had to do it. Maybe it was just my luck to be picked out." Of one of his other books he remarked wryly that perhaps it was "a sanitarium for overworked coincidences." But he always bobbed up after such momentary depressions, ready again to throw down the gauntlet to conservative science.

"On the surface," Joseph Henry Jackson wrote in 1943, "Charles Fort was simply a man with a curious taste for collecting clippings from newspapers and periodicals, provided the stories related to unexplained happenings.

"Underneath, Fort was much more than this. He was no mere crank. He had as sound a purpose in what he did as any of the scientists about whom he enjoyed being so skeptical. . . . What Fort was after was to remove the halo from the head of science, to make people think; to destroy, if possible, the faith of scientists in their own works, thus compelling a general return to the truly scientific principle of temporary acceptance."

Two years before this, Jackson had written that Fort's "favorite occupa-

tion was saying 'No!' or, at the very least, 'Oh, yeah?' His interest was in all of life, but specifically physics and astronomy. To the physicists and astronomers, Fort made a lifelong habit of saying, 'Is that so? Well, how do you know?' Sometimes they found him very difficult to answer."

I have seen it stated somewhere, perhaps apocryphally, that Karl Marx once remarked that he was not a Marxian. Fort was very frequently not a Fortean, and acknowledged it. His mischievous humor kept him safe from fanaticism. "Sometimes," he confessed in a letter to us, "I astonish myself by not thinking whatever I'd prefer to believe."

About one thing, however, he was in deadly earnest: the authentication of his facts. The enormous number of notes and clippings and communications which he "filed" in cardboard boxes in his Bronx flat had all been severely checked and verified before he presented them to the world. He destroyed some 25,000 notes that he could not sufficiently prove to be accurate.

But he would have been the first to admit that the conclusions he drew from his data were opinions and not creeds. The farthest he ventured was to the making of hypotheses; and when — as sometimes happened — he could be convinced that his premises were invalid, he was willing to acknowledge himself in error. He had a mind that remained, to his death at nearly 58, completely open and flexible. He called himself a poet; and a poet in the larger sense he was — he had the creative mind of a sensitive and intelligent child. He also had the utter candor and courage of a child: it would never have occurred to him that it might be impolitic or dangerous to announce loudly that the Emperor had no new, or any, clothes on at all.

Charles Hoy Fort had so uneventful a private life that it would be difficult to write a biography of him unless it dealt almost exclusively with his ideas and his work. He was born in Albany, New York, on August 9, 1874. Absolutely all I know of his family background is from a letter written in 1925, in which he said there was something about my name that "fascinated" him — "even though I have an old she-devil of an aunt, monstrously old and ferocious, whose name is Miriam."

He had little schooling, apparently, except what he gave himself. But he had that most thorough sort of education which comes from intensive reading and experiment. "I wish I had gone into biology," he wrote wistfully, but immediately added: "I was quite a taxidermist when I was a boy, and had a collection that filled a room." It is indicative of his inquiring, curious sort of intellect that his sole recreation in later years was a game he had invented himself — supercheckers, he called it, played like checkers but with 1600 squares.

He had wanted to be a naturalist, but economic circumstances made

that impossible, so he became a newspaper reporter. I have no idea how good a reporter he was, but I am quite sure he hated the work; all his life he was a shy, ungregarious man who shrank from too much direct contact with his fellow beings. By the turn of the century Fort was living in New York, earning what was never a very comfortable living by free-lance writing, mostly of short stories for the popular magazines of the time. At twenty-two he had married Anna Filan. They never had any children, and they lived as quietly in New York or London as if they had been residents of some isolated small town. Mrs. Fort was said to be a neighborly person who deplored her husband's unsociability, and was altogether without interest in his work. But she was philosophical; she consoled herself by going alone to the movies, and by becoming a magnificent cook.

I am not sure if anyone alive today knows precisely why Charles Fort began his quest for the "excluded." We do know that it was about 1908 that he began collecting the material which eventually went into his books. He was an expert shorthand writer and an inveterate note taker. At first he seems to have merely noted odd or remarkable occurrences that appealed to his taste for the unlikely and contradictory. Then, gradually, he began to see a pattern. He traced the convolutions of that pattern for the rest of his life.

By the time his second book appeared, he had exhausted the newspaper and magazine files of the New York libraries, and was living in London, hunting for more and more "damned" facts in the British Museum. Anyone who had done research in newspaper files — and newspapers and technical periodicals, naturally, were Fort's most important quarries — knows what it does to the eyes. Fort's eyes were never strong, and he paid the penalty. For some time he was entirely blind. That is why his next book, *Lol*, did not appear until 1931, by which time, with the aid of powerful lenses, he was able to read and write again. On May 3 of the next year, before his last book, *Wild Talents*, had been published, he died of the effects of an enlarged heart. Mrs. Fort survived him only five years.

So fastidiously and scrupulously did Charles Fort avoid the dogmatism which he abhorred in the writings of some of the orthodox scientists, that he seldom made a downright statement. "My acceptance is" — "my own pseudo-conclusion" — "the expression is" — phrases of this sort dot his work. Partly under the influence of his journalistic past, partly as a reflection of his own highly individual personality, he evolved a style as stimulating to read as it is hard to describe. (I wish also I could reproduce here his unique handwriting — a sort of disjointed half-printing, done with a blunt pen in very black ink.) He had a gift for the happy phrase, for the surprise of unexpected clarity. A man does not disappear — he is not

always even teleported — he is “translated into the positive absolute.” “I take for a principle that all being is the infinitely serial, and that whatever has been will, with differences of particulars, be again —” (The dash instead of a period is Fort’s own, and quite characteristic.) “You know, I can only surmise this,” *Wild Talents* begins abruptly: and we are headlong into a story of arson by remote control. Sometimes the style becomes jerky and irritating, more often it is fresh and exciting, and it is never somniferous.

The earliest of Fort’s books sets the pace for all that followed. Its very first words are:

“A procession of the damned.

“By the damned, I mean the excluded.

“We shall have a procession of data that Science has excluded.

“Battalions of the accursed, captained by pallid data that I have exhumed, will march . . . Some of them livid and some of them fiery and some of them rotten.”

And these adjectives Fort intends to be taken literally; the facts he adduces *are* about things actually livid or fiery or rotten.

The ending of *New Lands* gives another bit of the flavor of his style:

“. . . Oblivion of a secret that has been proclaimed with avalanches of fire from the heavens, and that has babbled from brooks of the blood of crushed populations, and that is monumentalized in ruins.”

This style was not naïve; it was thoroughly conscious and aimed at riveting the reader’s attention. Fort was a professional as a writer, if not as a scientist. Of *New Lands* (he called its title “perhaps uninspired”), he wrote us: “There are some experiments in structure in this book that will interest you . . . I shall be glad to hear what you think of some of the frenzies in it.”

Fort was entirely prepared to have his hypotheses knocked down if he could respect the arguments against them; what he insisted on, and seldom got, was having his objections and questions taken seriously. Disarmingly he wrote, from London in 1925:

“The stationary earth:

“That very likely it moves, because the other planets move.

“But why say the planets are ‘other’ planets?”

“But why think that this earth is different?”

“I have not much interest in discussion of this type. My acceptance that the earth is stationary is founded upon two bases. One is [he never mentioned the second] that I want so to accept, because unless this earth be stationary, there can be no exploration beyond it. That’s not scientific, but here’s where I come out inductively.”

His quarrel with the orthodox scientists was that, confronted by data that upset their established theories, they refused to consider them solely on their merits; that their first and only reply to a challenge was to dismiss it out-of-hand as "poppycock." He was not altogether fair: with no formal training in science and little conception of its method, he discounted impatiently the need for caution. But he was stung, and rightly so, by too much experience of being ignored and dismissed by the very people to whom his findings should have been of fundamental importance. In 1931, in a letter to Maynard Shipley, who had just reviewed *Lo!* in the *New York Times*, he said:

"I have read your review, and it is very encouraging to me. I note that you speak of my 'daring.' Yours is a higher type than mine. In writing one of my books, I risk nothing but the trouble of finding a publisher. This time, I had none, though an earlier version of *Lo!* traveled around unavailingly three or four years.

"Your review strengthens my notions of science as a system. How is it that you are not Professor Shipley, snugly salaried and nested? The answer is that Professor Shipley would be somebody who could not see of one book, nor of anything else, so many aspects, at one time, as you see of *Lo!* He could see only what would fit him in snugly somewhere.

"Something that you see in *Lo!* is that it is a kind of nonfictional fiction, or that, though concerned with entomological and astronomical matters, and so on, it is 'thrilling' and 'melodramatic.' I have a theory that the moving pictures will pretty nearly drive out the novel, as they have very much reduced the importance of the stage — but that there will arise writing that will retain the principles of dramatic structure of the novel but, not having human beings for its characters, will not be produceable in the pictures, and will survive independently. Maybe I am a pioneer in a new writing that instead of old-fashioned heroes and villains, will have floods and bugs and stars and earthquakes for its characters and motifs. [As witness the present popularity of books about the oceans and the mountains.]

"I am very much encouraged with your review, the spirit of which is — discount what you will, something remains, just the same."

Fort's letters overflow with his keen concern for the minutiae of everything in the physical universe. They bubble with new-formed ideas, from a mind that never stopped observing and speculating. The 1925 letter from which I quoted previously, goes on from the "stationary earth" to ants and moths:

"I am not convinced that ants plant seeds with an agricultural purpose or instinct. Perhaps they got into the habit of storing away seeds as a

squirrel buries acorns. If they never go to these stores, for food, and always wait for the seeds to sprout and grow, and bury seeds with regard for necessary interspacing, I'd be convinced. . . .

"I have a specimen of a queer noisemaker — the Death's Head Moth. It squeaks like a mouse, and the sound seems to be vocal. How the sound is made is not understood, but the moth is not a fiddler."

So much is an amateur naturalist's observation, but Fort's mind leaps ahead immediately. The Kalima Butterfly, he remarks, "which looks like a dead leaf, is said to imitate a dead leaf." Then instantly he pounces on the unnoted discrepancy: "But did the Death's Head Moth imitate a dead bone? Are birds superstitious?"

He concluded: "I should say that anything that is remarkable in one species can be found, less developed, in other species.

"I think that the lower animals, with all their reactions and adjustments made and established, are in a somnambulistic state, like the Chinese. But the Chinese are waking up. [This, remember, was in 1925.] Do you think that anything could wake up the ants and start them plotting against human civilization?"

In a communication to the *Boston Post* in that same year, apropos of a Massachusetts stone-fall, he wrote in the same vein — at once daring, tentative, jocular, and earnest:

"Of course there may be no such place as the Island of Chappaquiddick, though if there be none, that is a very good name going to waste; and there may be no other inhabited worlds, or, if there probably are, likely enough the last notion to occur in them would be the idea of communicating with this barbarous world; but it is out of uncertainties and incredibilities that everything that ever has developed hugely has had origin."

Fort seized on every new idea and shook it to pieces to find its insides. "If Biela's comet divided, why did not one part revolve around another part? Has the mass of a planet anything to do with its orbit? If so, how can it be thought that part of a divided comet would continue in the whole comet's orbit? . . . As to attenuated matter of comets, I have notes upon stars that were obscured by nuclei of comets . . . Do you think that a very dense atmosphere would shield a planet from the heat of the sun? I should say that, proportionately to its density, atmosphere is a good conductor of heat.

"How about determining the rotation of the sun at the latitude of 75 degrees? Very few spots so far from the solar equator have ever been seen. . . .

"As to Jupiter's absence of crust, there is, or there used to be, the Dark Hollow near the Red Spot. It was a fixed feature for many years. I think

that Jupiter is not molten, because the satellites never shine with reflected light from Jupiter when in position so to do. Perhaps the planet's thick clouds prevent."

From astronomy he went on to philosophy. "I can't think that a dead animal is as complex as a living animal. A dead animal is disintegrating, but a living animal, in its metabolic processes, is both disintegrating and integrating. Until recently, I could not think that there is free will, but to say there is utterly no free will is to make an absolute statement, and I am suspicious of all absolute statements."

He was indeed. "He compiled books," wrote Idwal Jones after Fort's death, "in an apocalyptic prose, and in a cold excitement recited wonders that would have frozen the blood of Sir John Mandeville." Joseph Henry Jackson, reviewing *Wild Talents*, put much the same thought into other words: "His combination of childish naïveté and brilliant dialectic ability is enough to turn your most cherished notions upside down, if only for the moment. You recover from Fort . . . but the shock you've had in the meantime is good for you." It was Jackson also who remarked on Fort's "outstanding characteristic — the gift for looking at a topic from the standpoint of a high intelligence which had just never happened to hear of that particular topic before."

Add to this superchildlike approach to reality — which was never lost by this little elderly man with the thick spectacles and the gray walrus mustache — a spirit absolutely without trepidation, with utter sincerity and inhuman industry; and you have a combination which, when applied by a sharp intelligence to a multifarious assemblage of disparate facts, produces something *sui generis* and highly provocative to any mind with the least portion of intellectual curiosity. "Reading Fort is a ride on a comet," Maynard Shipley wrote. "If the traveler return to earth after the journey, he will find, after his first dizziness has worn off, a new and exhilarating emotion that will color and correct all his future reading of less heady scientific literature."

It is perhaps natural that some of the dizzy readers — possibly in indignant reaction to such slurs as Edmund Pearson's classification of Fort's books as specimens of the "freaks and curiosities of literature" (in *Queer Books*, Doubleday, Doran, 1928), or the characterization of his work by John T. Winterich as "a kind of screwball *Golden Bough*" — have soared to heights of hyperbole that would have embarrassed Fort himself mightily. Charles Fort did not "engage in investigations which make Einstein's seem piddling," as Burton Rascoe let himself declare; nor was any book of his "the *De Revolutionibus* and the *Principia* of a new era of discovery wherein there will be an entirely new arrangement of our patterns of

thinking." He may have been "the Apostle of the Exception and the Jocular Priest of the Improbable," as Ben Hecht described him, but he was decidedly not, as the humorless Dreiser called him, "the most fascinating literary figure since Poe." He was not a literary figure at all. Words were his tools, not his idols. What he was, or at least what he aimed at being, was an enzyme to stir things up in the body of science, to the benefit of its health.

It is significant that not one of the Founders of the Fortean Society, which dates its calendar from 1931 — "The Year 1 FS" — was any sort of scientist, and that only one of its Honorary Founders, Eric Frank Russell, was even a writer of science fiction. (Maynard Shipley was invited to become a Founder, but declined.) Tiffany Thayer, its organizer and high priest, editor of its magazine, *Doubt* (formerly *The Fortean*), is perhaps as far removed from being a scientist as a man can well be.

Upton Sinclair once commented that in writing *The Jungle* he had aimed at people's hearts and hit their stomachs. Fort leveled at the scientists and in large part hit the literary folk. (His impact on science fiction is tremendous.) That would have given him a certain amount of wry amusement — he never had a very high opinion of the educability of the narrowly specialized.

What he would not have excused, I think, was the casual coupling of his name and prestige with the voicing of political and social beliefs he neither shared nor sanctioned. Mr. Thayer has used his magazine, not only as a means of publicizing Charles Fort's work and collecting new Fortean data, but also, unfortunately, as a vehicle for his own highly controversial views in fields where Fort never expressed himself.

I do not want to make an unsupported accusation. So let me give just one instance: from *The Fortean* (as it then was) for June, 1943 — in the midst of World War II. Here are some of the "questions" Mr. Thayer saw fit to ask in a periodical ostensibly devoted to the subject of Fortean phenomena:

"Was it more than coincidence that three submarines of different nations sank by 'accident' in the space of less than five months in 1939? Or might these sinkings have been heroic token pledges of good faith — and at the same time the signal of readiness for 'incidents' to begin?

"Is Hitler the only politician who knows the bigger the lie is, the more readily the mass swallows it?

"Was the *Panay* incident an abortive 'Pearl Harbor'? Who wasn't ready?

"Is 'inflation' a bugaboo invented to frighten you into *liking* the highest taxes of all time? To frighten you into accepting 'frozen' wages to keep you poor? Is 'syphoning off the excess purchasing power' merely another

term for robbery by the tax-eaters? What will be the difference between you and a slave if 'your' Congress legislates to 'freeze' you in your job?"

And so on. Mr. Thayer had every right, if he wanted to take the risk, to oppose the war and the administration then governing the United States. But he had no right, in my opinion and in that of many others, to do so under the cover of a magazine purporting to be devoted to publicizing the ideas of Charles Fort, who died nine and a half years before this country entered World War II. I do not wish to be unfair to Mr. Thayer, who as late as 1947 invited me again to join the Society, because my husband and I "were among the very few whom Charles Fort actually liked." I might even agree personally with some of his extrascientific views. All I say is that the Fortean Society and its organ are not the media through which to express them.

Fort once sent me one of the little "fairy crosses" found scattered on the ground in southwestern Virginia—a tiny thing, three quarters by half an inch, of some unknown stony but light material, which under a magnifying glass shows signs of being a carved artifact.

To me this cross typifies the whole of Fort's legacy to knowledge. For years these objects had been known and written about. But nobody bothered to speculate what they might be, whence they might have come, until Fort, with his direct, unclouded receptivity, looked at them afresh, and wove them into his unique reconstruction of the history of our earth.

That reconstruction, and the conclusions Fort drew from it of our "belonging" to some extraterrestrial power, may indeed be completely erroneous. I do not know. But I know that one thing is not erroneous: the only way mankind will ever apprehend the whole truth about itself and about the cosmos is by learning to look, to question, to hypothesize, with the bold, unprejudiced, and inquisitive mind which was Charles Fort's.

That approach is the true approach of science, which sometimes it forgets—and of which it was Fort's chief service to remind it.

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- The complete listing of Charles Fort's hardcover publications is:
THE OUTCAST MANUFACTURERS. New York: B. W. Dodge & Co., (1909). 328 pp.
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WILD TALENTS. New York: Claude Kendall, (1932). 343 pp.

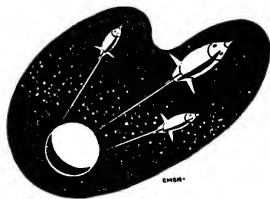
THE BOOKS OF CHARLES FORT [containing all but the first of those listed above]. With an introduction by Tiffany Thayer. New York: Published for The Fortean Society by Henry Holt & Co., (1941). xxvi + 1125 pp.

The last is the only Fort volume still in print. In its day considered a daring experiment in creative publishing by Holt editor William Sloane, it has by now become a solidly selling item. It includes an invaluable index of dates, names, places and types of phenomena.

Of the original editions, LO! (which surprisingly went into a third printing six weeks after publication) is the only one the average collector is apt to find inexpensively, and is worth acquiring both for the fittingly mad illustrations and for the preface, in which Mr. Thayer seems a truer disciple of Fort than in his later "Fortean" manifestations.

Unfortunately for fantasy collectors, the word *outcast* in the title of the novel is an adjective, and the phrase refers to the Universal Manufacturing Company, a minute semi-fraudulent mail-order business which becomes outcast for nonpayment of rent. The book deserves attention which it has never received as a purely realistic genre novel well ahead of its time — objective, unromanticized, and observed with acute eyes and ears closer to those of Ring Lardner or Sinclair Lewis than the average novelist of 1909. There are marked rhythmic echoes of what we think of as Fortean style in the rare descriptive passages, but most of the novel is written in a sharp phonographic, somewhat Chekhovian dialog technique.

— A. B.



Raymond E. Banks is one of that seemingly multitudinous array of "up-and-coming younger writers" of science fiction. He is also one of that throng's most original thinkers. Here is no tale of galactic empire, time and/or space travel, or even psychosymbiosis, but a straightforward account of everyday human beings celebrating a Christmas yet to come. It is, too, a marvelously heartwarming story. Mr. Banks believes, as should we all, that despite every innovation the spirit of Christmas is eternally changeless and in the most sophisticated future a gift of the Magi may be merely a precious chance for a simple guy to "toot his own horn."

Christmas Trombone

by RAYMOND E. BANKS

IT WAS CHRISTMAS EVE and Shorty went into the closet and dug out his old trombone. He pumped it a couple of times and made a lip on it and let out a blast. It came out as two sour bleats.

"Hold the phone," he told himself. "You've dialed yourself a wrong number."

There came the insistent cracking of Mrs. Thompson's thimble on the radiator pipes. He had a very particular landlady, the toughest old gal in Blessington, and she didn't encourage her roomers in their self-expression.

Shorty made two soft, low mocking notes on the horn. Clean stuff that rolled off the ear. Too bad he didn't dare toot out loud what he thought of her.

He shoved his horn under his coat and went downstairs. Mrs. Thompson met him in the living room.

"You playing that old horn again, Shorty?" she said.

"Figure on a few carols," he said.

"The singing cones," she said firmly, "can do it better. If you try to play carols, they'll run you out of town for peace-disturbing."

"I've lived in Blessington for 45 years," said Shorty, "man, boy and tadpole. I want to see them run me out of town."

"Chief Nelson said the next time you tried to play that horn he was going to take it from you," she said. "The singing cones do it better."

"Who's afraid of Chief Nelson?" he said.

She sniffed in reply and went to the end table and turned on her singing cone. She punched out a number—inside, the wafer-thin discs of Venusian heavy water responded with real, throbbing stuff. Quarter of a million earth musicians had played to make those discs. All dissonance matched out by the peculiar properties of the inch-wide Venusian solidified water discs. If you had a perfect recording material and knew what to expect from the organ of Corti in the human cochlear structure of the ear you could even write an equation for the cones' "perfect" music. Shorty grunted and went out into the cold night with his horn.

He listened. Moon was out; stars were out. A light, crusty snow covered the earth. He could see the lights of Blessington twinkling on the snow. He could hear the voices of far-off carolers. They were fewer every year. He could hear, most of all, the singing cones. From private homes, from the bars, from Salvation Army kettles, Christmas music hung heavy on the air.

Over on Grover Cleveland Street he could hear the dominating throb of the biggest singing cone in Blessington. It was going to be a big night at the Church of All-Comers, and the Rev. Dr. Blaine was warming them up with a candlelight service.

Straight out from Venus, that cone. Not a factory job stuffed with Venusian water discs, like Mrs. Thompson's, but a real Venusian cone. Eight feet high. Inside gallons and gallons of purest Venusian water, hungry for the sound of music. Once a clean pattern of sound was heard by that container, it solidified a portion of the water and remained in crystallized perfection, captured for the centuries-long life of the cone . . . come midnight and Dr. Blaine would give the signal to the altar boy. Altar boy would play the exciter cone and the big cone would pour forth its tones throughout the Dominic Valley like an unearthly benediction and everybody would shudder in delight at the sound of the All-Comers cone—they would sure know it was Christmas!

Shorty's nose got cold and his feet went numb as he crunched through the snow. In one pocket bulged the package that he had for Dr. Blaine, in the other the one he had for Edith. After that, a quick cup of Christmas cheer at the Dogleg; then home and he'd be in bed by 10 o'clock. With his ears stuffed with cotton. He didn't want to hear the singing cones on Christmas Eve. He had always made his own music, always would. He wouldn't play for the singing cones like the other fools of earth musicians, giving up their souls to the gadgets. He had something better inside.

Hadn't come out yet, but someday he'd show them. When he was ready. None of this stuff of having the cones change around and delete like they did, because they'd heard the tune better somewhere else.

He walked resolutely past the Dogleg. Time for that later. A few citizens were just going in for Christmas cheer and one of them asked Shorty how soon his aircar would be repaired and out of Shorty's garage. Whenever Shorty had a particularly tough repair to do, like this job, he always mumbled something about getting parts "from upstate." The citizen rolled his eyes and shrugged while his companions laughed.

"When the singing cones came, we lost a good musician and gained a poor mechanic," said one. "That right, Shorty?"

"Don't talk to me about the singing cones. They hit me in my income."

"Where you going with that trombone, Shorty?" asked another. "Chief Nelson sees you with that old slush pump, he'll run you in."

"Let him try," said Shorty, passing on.

He ran into Chief Nelson just a block before he got to the church. The Chief stopped him.

"Now, look, Shorty. Last Fourth of July I told you that you couldn't be playing that horn and disturbing the peace."

"I'm not playing it, Chief. I'm carrying it."

The Chief blew on his cold hands and stamped his feet in the snow, his face red from the gleam of the Christmas lights strung overhead on the street lamps.

"Man carries a gun, he figures to use it," he said.

"It's my own personal, private property."

"I got rights too," said the Chief. "To protect the peace. That sour old horn of yours always makes trouble when you get a couple of Dogleg Specials in you. Hand it over."

"I won't."

"You can have it back tomorrow, Shorty. I'd rather put the horn in the jail safe than put you in the jail cell."

"Go to hell."

"May I be forgiven for preventive maintenance," said the Chief. His burly arms slapped at Shorty and he jerked the trombone from Shorty's grasp. Shorty shouted something incoherent and slugged at the Chief. But in the snow he missed his footing and slid to the ground.

"Stay with your repair business," said the Chief, marching off triumphantly with the horn.

The sharp wind stung his eyes and they filled with tears as he rose again, alone on the street. He felt a cold, unpleasant place where the snow clung to his clothes. Time was when he played for all their local affairs. Time was when he played the organ for weddings (including Chief Nelson's) and

funerals (it'd be a pleasure to rumble that old boy down), led the choir and provided the hot music for local dances. That was before the singing cones.

A whiff of Christmas cooking fell on his nostrils as he went up the street to the church. Everybody was busy, happy, alert with Christmas, but it was agony for him.

Dr. Blaine smiled up at him as he entered the study, sniffing because the warm air made his nose run.

"It's good to see you on Christmas Eve," said the clergyman. "Just like the old days when we had the choir and organ."

Shorty handed over his gift and got one in return. "I sure do miss that midnight service," said Shorty. "Church crowded, the special feeling of importance in the decorations and the occasion, the choir all worried and nervous about the long, extra-special program they had to get through with perfection . . ."

"I'm afraid Christmas for you was waffles at 1 A.M. in the rectory," smiled Dr. Blaine. "It's more than just a show, Shorty. It has something to do with Christ, remember?"

He felt better at the scolding. Dr. Blaine was a real soul-chaser. Felt good to have somebody worry about you.

"Sure," he said.

"Coming to the midnight service tonight, Shorty?"

Shorty frowned. "You've got your singing cone," he said.

Dr. Blaine took him by the arm and led him into the nave. Across from them rested the only true singing cone in Blessington. It was almost eight feet high, a tapering mound of pure whiteness, just as it had been on Venus. It "lived" on sound, not talking voices, not explosions or discords. It "lived" on music adding every sweet sound it heard to its repertory until all its water was solidified and it could no longer hear and remember.

Near it stood the exciter cone, an ordinary cone-shaped home recorder which gave off the first few notes of the required tune and then surrendered to the swelling grandeur of the big cone that picked up the tune and played it through in perfection — remembering all of the overtones of all the musicians or singers it had ever heard play or sing. One decibel for four, and if you turned up your little exciter cone high, the Venusian cone roared loud enough to shake the church and fling its quivering harmonies throughout the length of Dominic Valley.

"Here," said Dr. Blaine, "I've got all the great artists who ever recorded Christmas music, Shorty. The best voices, the best arrangements."

"I know."

"People need the solemn pageantry of the greatest church music to find the Christmas spirit in these commercial times."

"Yeah."

"This cone was a foot-high mound on Venus the night Christ was born in Bethlehem, Shorty. It's been on earth now for twenty years, adding only the purest and best church music to its being."

"It's only been in Blessington five years," said Shorty, "while I been here 45, man, boy and molecule."

Dr. Blaine sighed. "Nobody wants the old choir and organ any more, Shorty. When the cone plays we go back along the centuries to Bethlehem, we watch the miracles beside the Red Sea, we are in the room where the Last Supper was served and we walk with Christ up that final hill—"

"A couple of times I got 'em pretty excited with that old organ you got stashed in the basement."

"Then play for the cone, Shorty," said Dr. Blaine. "Play for the cone and make it hear and remember your notes alone with the world's best musicians."

Shorty cleared his throat. "I been meaning to tell you, Reverend. I took a look at your aircar today. You need a new rotor blade."

In the silence that followed, Dr. Blaine shrugged and then went across and opened the stained glass windows behind the cone. Shorty knew why he did that. In a few hours now it would be time for that cone to fill the valley with sound. Funny, nobody ever opened the windows to let the music out in the old days. Just as well, though. You take a choir singer with a cold, he gets mean.

"You've lost a lot of friends in these last years, Shorty," said Dr. Blaine. "Even Edith's been worrying about you lately. I think you need to come to church."

"That's a thought, Reverend," said Shorty without conviction. He turned to leave. "Merry Christmas."

"Merry Christmas," said Dr. Blaine sadly, watching him go.

Edith wore bangs. Her round face was wrong for bangs, but Shorty had long ago given up worrying about her face because below the chin she was all woman. She had a bowl of Christmas punch and they had one. She looked pretty good, he thought, in her new Christmas dress.

"Thought I might go to the Church of All-Comers tonight," she said. "What're you going to do?"

"Thinking of breaking into jail."

"Why?"

"They went and arrested my trombone."

Her eyes mocked him. "Give it up, old boy. When the All-Comers cone gets rolling, nobody wants to hear your sour old 'horn."

"Time was —"

"Give it up, Shorty! In the old days you were something else beside the aircar repairman when you stood up before the people of this town and played your music. Now you're just Shorty from the aircar repair shop with a musician's pension."

Her face was incredibly soft in the dim, multi-colored glow of the Christmas tree lights. It was a good, factory tree with bulb-shaped projections that were part of the plant and yet gave off tender, colored lights, finer than the old-fashioned Christmas tree lights. And approved by Underwriters' Lab, of course, since the tree generated its own electricity and was shockproof.

"What're you trying to say?"

"Maybe I'm tired of waiting for you to snap out of it. Maybe I'm going to Church tonight anyway — with Del Gentry."

"I guess it's legal," he said, "as long as you save me New Year's for the jam session over in Kingsbury."

"New Year's I'm going to Del Gentry's party," she said. "I'm tired of a sour old aircar repairman for company."

He couldn't control himself. He sent the tree down with an angry flip of his hand. She sat with a set smile on her face, her Christmas cup before her face, both arms resting on the table. Like somebody who'd said something a long time coming.

"Phoney!" he shouted. "Like the singing cones. Everything phoney!"

"Sure," she said. "Everything that's been invented since you were twenty is phoney, Shorty. But the world moves on. That tree is better than the old ones. The singing cones make better music than the old music —"

He jerked the home-sized singing cone she had on the end table from its socket and smashed it at the wall. The wafer-discs raced over the floor in aimless circles.

Edith didn't move. "You can't go on being twenty and smelling the apple blossoms in the spring forever, Shorty —"

"I've got a soul!" he yelled at her. "I ain't no aircar repairman!"

"You've got an ego," she said.

Shorty wheeled and ran out, slamming the door.

"Merry C-Christmas," Edith whispered.

Chief Nelson was at the Dogleg. Shorty went to the jail instead and sat down at the desk with the extra man.

"Sure is cold out."

"Yeah." Shorty's hands had finally stopped trembling.

"Chief said you might be around," said the extra man. "I was to tell you — no playin' on trombones."

"Who wants to play on a trombone?" asked Shorty. "I got my musician's pension."

The man leaned forward. There wasn't anybody in the jail and he was bored. This was diversion. "How about that pension stuff?" he said. "How about that?"

Shorty shrugged. "When the singing cones idea was brought in from Venus, the music companies did a right noble thing. Gave everybody who held a card the amount of dough they could reasonably expect to make over a lifetime. They even subsidized schools for the kids —"

"Subsawhooded?"

"Gave dough," said Shorty shortly. "So the kids that're coming up would get a chance to play — for the singing cones. Then the cones gobble up *their* music too. Get fat offa the young talent. They still buy new tunes, even for the cones. But there ain't no real music any more."

"You ever played for the cones?"

"I been asked," said Shorty, "but I never have; I'm not ready. You stand up in front of a real one — the cones record you forever. But they only pick up your best stuff and delete the rest." He shuddered. "They suck up the soul you put in music. I still got self-respect, even if I only play for myself."

He eased open the bottom drawer of the man's desk with his toe; saw the glint of a bottle.

"I don't know," said the man. "Seems to me when my singing cone plays a sad tune I want to cry. Happy makes me laugh. I ain't much for music, but those cones sure make you wiggle better than the old music."

"Why not? They've got the souls of all the earth's best musicians." Shorty peered down into the drawer. "Looks like a bottle down there," he said.

The extra man peered down. "Say, you're right."

"Looks like whisky," said Shorty.

The extra man's face was almost angelic. "Say, it sure does," he said. "How'd a bottle of liquor get into this little, old jail?"

"It ain't too far to reach," hinted Shorty.

"By God, I bleeve I can make it," said the extra man, reaching for it.

Shorty clipped him on the neck. The man went "gawwwk!" and rolled over on the floor, unconscious. "Merry Christmas," Shorty muttered to him, digging for the keys to Chief Nelson's safe.

It was midnight. Shorty was pretty well away from town now. The moon was big in an amazingly clear sky. The powdery snow numbed

his feet; the air stung his lungs. The horn felt cold even through his gloves. Down below he could see the lights from the windows and doors of the Church of All-Comers dancing on the snow.

Suddenly he wondered about himself. "What am I doing out here all alone?" he asked himself. "Got to get out of town to even play my horn any more." His hands were trembling as he took off his gloves.

"Man likes to play horn; man's gotta play a horn," he said, scowling at a jackrabbit that broke through the underbrush and then quickly retreated.

He looked over the silent, snow-covered empty hills and then back at the friendly lights of the All-Comers Church and then he knew that this would have to be the last time he ever played the horn. Otherwise you'd be going up the mountain for keeps, he told himself.

He blew a blast. It sounded real loud. He stirred in surprise when he heard an answering blast from the singing cone down in the Church.

Shorty pumped his chest full of the open valley air. He remembered all the years he'd been in the center and how they were gone and felt sad — so he blew happy. He ran off "Joy to the World." He made a couple of sour notes, but it was loud and bold and joyful and he felt better. "How do you like that, cone?" he asked silently.

As if in response the singing cone down below in the Church gave it back to him — "Joy to the World." He stood still in shock, because it had picked up some of his own notes. He could see some of the people still outside the church, turning to stare at the hill where he stood. By gosh, they could hear him. Even the cone. Old Blaine must've turned the big cone around to those open windows when he heard that challenging blast.

He felt hot and cold inside. He thought how it was with people with everything changing and being different and nothing was really eternal, and pretty soon it was your last chance to toot your own horn. He felt lightheaded with anger and frustration and sadness and then suddenly he needed his own music real bad. Something to say everything he'd felt in a simple, dignified way.

Here goes.

Silent Night. Not too gooeey, not too sweet. Firm and clear and certain. He began to cry at his own music; he couldn't help it. The tune was somber and great and all-embracing, and the occasional catch in his throat gave the old horn a tremolo he'd never had before.

*Silent night, Holy night!
All is calm, All is bright,*

The cone was silent, listening. He could feel its presence in the background. A moment before it had been scouring out the valley with its

sound. Now it was comparing his notes with all the wonderful music stored in its memory.

Softly, you son-of-a-bitch, he told himself. This is final. Shorty, by God, now we've got to do the thing!

For 45 seconds he reached the great plane of art that he'd been trying to reach all his life. For 45 seconds he made music that no human or nonhuman agency had ever made before or would ever make again. It was one of those moments. It was clear and clean, human but not gooey. It was one tiny notch more than satisfactory.

*Silent night, Holy night!
All is calm, All is bright,
Round yon Virgin Mother and Child,
Holy Infant so tender and mild—*

After it was over, he had just enough left to start again and use his horn as an exciter cone to the big one. Then he stood there, silent, horn to his lips, unable to move.

Now they came back to him, those golden, unforgettable 45 seconds; solo, nothing added, nothing taken away. No other sound except his own horn and his own soul. The cone had listened and compared down through its centuries of experience. The cone had found it good — all of it — nothing deleted, nothing added.

In Bethlehem, on Venus and beyond to outer space it was a thing of perfect uniqueness.

Shorty drew back his horn and hurled it as far away from him as he could. It had been inside and he knew it, but nobody else did — now they did. There was no need to play any more.

If you've got influence or friends, you can attend the world-famous Christmas Trombone services at the Church of All-Comers in Blessington. But it's pretty hard to get in on Christmas Eve. When they do that original version of "Silent Night" on the Christmas Trombone, you'll be glad you came, though. It's solo stuff with a keen, cutting edge and you'll never forget it. They've made a million discs for the home recorders but it's not the same.

And if you take a look over to your right, you'll see a short, fat man sitting in a pew, nodding and smiling. When they play the Christmas Trombone, everybody in Blessington watches him with a little awe. And his wife, Edith, grins. She's got a right to grin. That's Shorty Williams, the best doggone aircar repairman in Dominic Valley, and the man who taught the singing cones how to handle Christmas carols.

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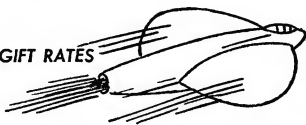
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